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ABSTRACT

Forty classroom activities selected from New Internationalist Calendars published between 1984-1989 were collected. Each activity is presented in the form of a short story about a real-life person and a graphic spread of data consisting of maps, tables, photographs, diagrams, text, and student exercises. These activities have been written to achieve the following objectives for development education: (1) to present knowledge about development issues to students in an attractive format; (2) to develop basic reading, comprehension, graph and picture interpretation and writing skills; (3) to promote critical thinking skills through the analysis and evaluation of a variety of types of information; (4) to promote an understanding of the development problems facing people in Third World countries, and empathy with people from different social, economic and cultural backgrounds; (5) to develop an appreciation of the interdependence between the lives of people in Australia and people facing a variety of similar and different development problems in other countries; (6) to develop decision making skills through the consideration of alternative approaches to development; and (7) to promote a willingness to become involved in seeking solutions to development problems. Topics include international trade, the global economic system, work, population growth, the family, health, food production, pesticides, water, ecology, tourism, urban drift, conservation, environmental issues, and technology. (KR)

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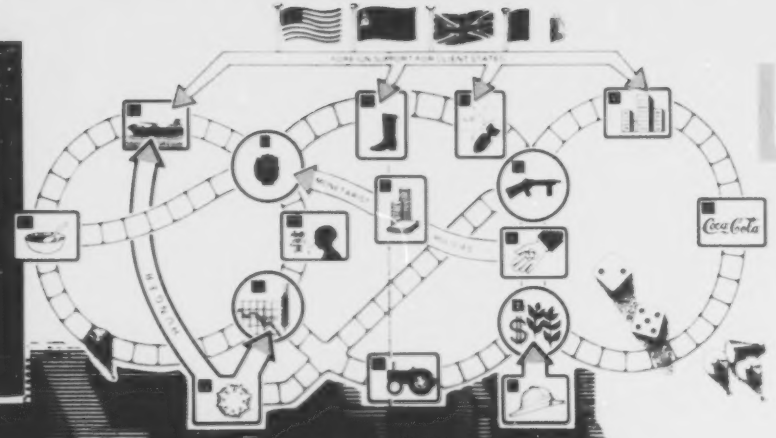

Living in a Global Environment

Classroom Activities in Development Education

Edited by John Fien
Australian Geography Teachers Association Inc.

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1989

Living in a Global Environment
Classroom Activities in Development Education

A publication of the Living in a Global Environment Project of the Australian Geography Teachers' Association Inc. which was sponsored by the State and Territory affiliates of the Australian Geography Teachers' Association Inc., the *New Internationalist* office in Australia, and the Australian International Development Assistance Bureau.

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Preface

A curriculum development project which produces a book of classroom resources and activities such as *Living in a Global Environment* depends upon many individuals and organisations for its success. The Australian Geography Teachers' Association Inc. wishes to thank all who assisted the project in any way, especially:

- The *New Internationalist* office in Australia and Ann Jennyson for their cooperation at all times and for permission to reprint the stories and graphic spreads upon which the activities are based.
- The State and Territory affiliates of the Australian Geography Teachers' Association Inc. and the Australian International Development Assistance Bureau who provided the funding which made the process of curriculum development and the production of this book possible.
- The *Living in a Global Environment* Project teams of coordinators and authors around Australia who actually did the hard work of writing, trailling, editing and re-writing the activities.
- Lesley Cassidy, Jennifer Burnett, and Marie Cooke who know the activities better than anyone because they word-processed them so often and finally told the Editor "no more changes, please". Special thanks are extended to Lesley for her patience with the Editor and for her Macintosh desktop publishing skills.
- Vivienne Wilson and Diane Brims of Brisbane College of Advanced Education who produced the bromides and designed the front cover.
- John Fien, the Editor who coordinated the *Living in a Global Environment* Project from conception, objectives and design right through to final editing and publication.

Thank you all, not only from the Australian Geography Teachers' Association Inc., but also from the literally thousands of teachers and students who will enjoy working with these development education resources and activities in coming years.

Roger Smith
President
Australian Geography Teachers' Association Inc.

Introduction

> A child born today will be faced as an adult almost daily, with problems of a global interdependent nature, be it peace, food, the quality of life, inflation, or scarcity of resources. He (sic) will be both an actor and a beneficiary or a victim in the total world fabric, and he may rightly ask: "Why was I not warned? Why was I not better educated? Why did my teachers not tell me about these problems and indicate my behaviour as a member of an interdependent human race??
>
> It is, therefore, the duty and the self-enlightened interest of governments to educate their children properly about the type of world in which they are going to live. They must inform them of the action, the endeavour, and the recommendations of their global organizations ... and prepare their young people to assume responsibility for the consequences of their actions and help in the care of several billion more fellow humans on Earth (Muller 1982).

As one approach to providing such a global perspective, development education promotes the values of equity, human rights and social justice as principles upon which education and action can be organised to make this Earth, our home, a more peaceful, just and ecologically sustainable place in which to live. Sadly, much development education to date has proven counter productive. Indeed, at least one research study indicates that the "amount" of development education a student receives is not a significant factor in influencing the degree of empathy for other people or readiness to take appropriate action he or she will display. Courses that focus on Third World problems are likely to have the opposite effects to what was intended Hirsch-Cahannes and Techlenburg 1987). The important issue is not the *amount* of development education received but the *quality* of it. For development education to be successful, it needs to be treated as a dynamic process that encourages students to reflect on the links between their own lives and situations and livesof others. Margaret Smith and Roger Smith (1989) argue that such an approach to development education has four key concerns:

- It is about *Global Concerns* - recognizing that we live in an interdependent world. It aims to develop understanding of the interacting factors that cause poverty, social, economic, and political injustice, inhumanity, conflict and environmental abuse in our own country and internationally.

- It is about the *Powerful and Powerless* - for it is concerned with how things happen, who decides, who has power and who does not. It promotes enquiry into prejudice and discrimination, like racism and sexism.

- It is about *Critical Awareness* - of our own and other societies and cultures. It is a search for alternative views, experiences and methods that acknowledge equality of people within and between nations. It recognises the diversity of views, complexities, experiences and approaches in our world.

- It is about *Participation* - developing the skills, values and attitudes that lead to commitment to responsible action for change towards the preservation and fair distribution of the earth's resources and a more just society, locally and globally.

When seeking source material for this book of classroom activities to promote such an approach to development education, what better place could the Australian Geography Teachers' Association Inc go than to *New Internationalist*? This magazine has proven over many years to be a reliable source of well researched and up-to-date information on the current status and causes of many global concerns, and the relationships between the powerful and powerless in the world. It has also provided carefully argued viewpoints on these issues and so promoted critical awareness and strategies for participating in making our world a fairer and less troubled home for us all.

While the *New internationalist magazine* is very well known, especially among geography, history, economics and other social science teachers, the annual *New Internationalist Calendar* is less well known as a source of classroom data and inspiration. The calendar page for each month contains a wonderful colour photograph which, when laminated, makes a most stimulating classroom poster or discussion starter. On the reverse of the photograph is a set of data on development education themes - a different themeevery month. A glance at the list of contents of this book gives an idea of the range and variety of the themes that are covered. The data for each theme is presented in the form of a short story about a real-life person and a graphic spread of data consisting of maps, tables, photographs, diagrams and text. All of the data used in the forty classroo, activities in this book has been selected from these flip-sides of pages in *New Internationalist Calendars* published between 1984 and 1989.

The classroom activities in *Living in a Global Environment* have been written to achieve the following objectives for development education:

1. To present knowledge about development issues to students in an attractive format.
2. To develop basic reading, comprehension, graph and picture interpretation and writing skills.
3. To promote critical thinking skills through the analysis and evaluation of a variety of typesof information.
4. To promote an understanding of the development problems facing people in Third World countries, and empathy with people from different social, economic and cultural backgrounds.
5. To develop an appreciation of the interdependence between the lives of people in Australia and people facing a variety of similar and different development problems in other countries.
6. To develop decision making skills through the consideration of alternative approaches to development.
7. To promote a willingness to become involved in seeking solutions to development problems.

All the authors of the activities are active geography teachers and lecturers and have written the activities for students in the 14-16 age range. However, the activities are flexible and certainly open to adaptation. Unfortunately, book size and cost limitations have meant that *Living in a Global Environment* does not cover every development education theme. However, the objectives and activities in this book do provide a model upon which others may be written. All involved in the production of *Living in a Global Environment* would like to encourage teachers and school faculties to use these activities in this book as a model for further development education work, and to invite education systems and teachers' associations to use the activities and the cooperative process through which they were written as a basis for in-service education and further curriculum development programs.

John Fien
Living in a Global Environment Project Coordinator.

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Calder, M. and Smith, R. (1989) *A Better World for All*, Australian International Development Assistance Bureau, AGPS, Canberra.
Muller, R. (1982) *New Genesis: Shaping a Global Spirituality*, Doubleday, New York.

1

Spaceship Earth

'GOOD MORNING.
'This is your captain speaking.

'I am aware that some disquieting rumours have been circulating around the ship in recent weeks about the state of our life-support systems.

'First of all I must admit that the life-support systems in the Third Class Compartment are indeed in a bad state. And it is my sad duty to inform you that several thousand of your fellow passengers have died in the last month. The fault lies in a breakdown of food, water and sanitation systems on board ship.

'As you know the vast bulk of the ship's supplies are kept under lock and key in the First and Second Class Compartments. There is no immediate cause for concern about life-support systems in these two compartments. But, at a recent Heads of Compartments meeting it was resolved that a larger quantity of these supplies should be made available to Compartment 3 on an emergency basis. However, it was thought that these measures would probably be insufficient and it was suggested that a more fundamental re-organisation of the ship's life support cycles was now necessary to avoid even more serious and widespread deterioration of conditions in Compartment 3.

'It was pointed out, for example, that the present rate at which the ship's stores are being used up in Compartments 1 and 2 is endangering the stability of the whole ship in three ways: First, it is using up stores too fast for the ship's resource generators to cope with and depriving Compartment 3 of the resources it needs to supply and maintain its life-support systems. Second, it is contaminating the air and water in the spaceship as a whole and may be affecting the delicate pressure and temperature controls. Thirdly, it is creating unfulfillable hopes and a sense of outrage and resentment among the passengers in Compartment 3.

'In addition, the stability of the ship is also threatened by various groups of passengers using up large amounts of potential life-support resources secretly to manufacture explosive devices. The ship cannot tolerate this for much longer because it is unable to sustain either the drain on supplies or the impact of the explosion should these illicit devices ever be used.

'At our last meeting the representatives of the Third Class Compartment put forward the view that most of our present in-flight problems are caused by the current organisation of life on board the ship. As one example they cited the fact that the ship's accountants, flight-deck crew and technical staff are almost all drawn from Compartments 1 and 2. This, they argued, inevitably leads to corruption and the favouring of the First and Second Class Compartments in all the ship's affairs.

'But their main criticism was one of the division of the ship into three compartments in the first place and they proposed that the present compartment structure be abolished, the ship's resources distributed more equally among all four and a half billion passengers, and that new decision-making processes be created that involve representatives from the whole ship.

'This is the biggest change ever proposed so far in this voyage. But it is my duty to inform you that the ship's present course is not sustainable and there is an urgent need to correct our current flight path to prevent a premature end to our voyage with our ship abandoned to float inert and lifeless as an empty shell in space.'

Source: *New Internationalist Calendar*, September 1984
By Kristin Black, Brisbane College of Advanced Education

Student Exercises

1. Read the passage, "Spaceship Earth", and answer the following questions:
   (a) Use six adjectives to describe life on board the spaceship.
   (b) What are the causes for concern in Compartment 3?
   (c) Do Compartments 1 and 2 share these concerns? Explain why or why not.
   (d) List three ways in which the people in Compartments 1 and 2 are endangering the stability of the entire craft.
   (e) What are the effects of certain passengers manufacturing explosive devices?
   (f) How do the people in Compartment 3 believe their situation can be improved?
   (g) Write one paragraph to summarise the present situation on board Spaceship Earth.

2. (a) Why is the Earth said to be a spacecraft?
   (b) Name three ways in which the author of the passage helps create this image.
   (c) What significance do Compartments 1, 2 and 3 have for real life situations on Earth?
   (d) Make a list of the problems on the spacecraft with their "earthly equivalents" e.g.

SPACECRAFT PROBLEM	EARTH PROBLEM

   (e) What is the future of Spaceship Earth?

3. Study the box called "The human family".
   (a) Calculate the number of passengers aboard Spaceship Earth from each of the earth's regions. (Hint: multiply the given number by 45 million.)
   (b) How many passengers are:
      (i) under the age of 15?
      (ii) over the age of 45?
   (c) How many have a car?
   (d) Give the actual number for the last year for:
      (i) deaths,
      (ii) weddings, and
      (iii) births.
   (e) Is the overall population growth rate of the world increasing or decreasing?

Continued on page 81

FACTS OF LIFE

The human family

Spaceship Earth now carries four and a half billion passengers.
An unimaginable number. Representing them as just one hundred people gathering for a pre-flight photograph, we would see. . .

11 from Europe
6 from the Soviet Union
6 from North America
22 from China
16 from India
16 from the rest of Asia
4 from the Middle East
8 from Latin America and the Caribbean
10 from Africa
1 from Australasia and the Pacific

- Many of the passengers are very young. 36 are under the age of 15. Only six are over 65.
- 20 people have a radio, five have a car, seven have a television set.
- Over the last year, there has been one death in the group. But there has also been one wedding. And three babies born.

Multiply these figures by 45 million and you have the actual population of the earth.

Three decades of progress

Income

GNP per person (1980 dollars)	*1950*	*1960*	*1980*
Industrial countries	4,130	5,580	10,660
Middle-income countries	640	820	1,580
Low-income countries	170	180	250

Average annual growth (percent)	*1950-60*	*1960-80*
Industrial countries	3.1	3.3
Middle-income countries	2.5	3.3
Low-income countries	0.6	1.7

Health

Life expectancy at birth (years)	*1950*	*1960*	*1979*	*Increase 1950-79*
Industrial countries	67	70	74	7
Middle-income countries	48	53	61	13
Low-income countries	37	42	51	14
Nonmarket countries	60	68	72	12

Education

Adult literacy rate (percentage)	*1950*	*1960*	*1976*
Industrial countries	95	97	99
Middle income countries	48	53	72
Low income countries	22	28	39
Nonmarket countries	97	97	99

Note: All tables exclude China.

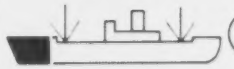
A world divided

The developing world has 75% of the world's people but only. . .

15% of the world's energy consumption

17% of the world's GNP

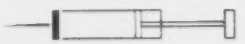
30% of the world's food grains



18% of world export earnings

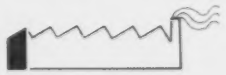
11% of world education spending

6% of the world's health expenditure



5% of world science and technology

8% of world industry



2

The modern parable

Photo: Mark Edwards

THERE was once a factory which employed thousands of people. Its production line was a miracle of modern engineering, turning out thousands of machines every day. The factory had a high accident rate. The complicated machinery of the production line took little account of human error, forgetfulness, or ignorance. Day after day, people came out of the factory with squashed fingers, cuts, bruises. Sometimes a woman would lose an arm or a leg. Occasionally someone was electrocuted or crushed to death. Enlightened people began to see that something needed to be done.

First on the scene were the churches. An enterprising minister organised a small first-aid tent outside the factory gate. Soon, with the backing of the Council of Churches, it grew into a properly built clinic, able to give first-aid to quite serious cases, and to treat minor injuries. The town council become interested, together with local bodies like the Chamber of Trade and the Rotary Club. The clinic grew into a small hospital, with modern equipment, an operating theatre, and a full-time staff of doctors and nurses.

Several lives were saved. Finally, the factory management, seeing the good that was being done and wishing to prove itself enlightened, gave the hospital its official backing, with unrestricted access to the factory, a small annual grant, and an ambulance to speed serious cases from workshop to hospital ward.

But year by year, as production increased, the accident rate continued to rise. More and more people were hurt and maimed. And, in spite of everything the hospital could do, more and more people died from the injuries they received.

Only then did some people begin to ask if it was enough to treat people's injuries, while leaving untouched the machinery that caused them.

Source: *New Internationalist Calendar*, January 1985
By Julie Dyer, GTAV Executive Officer, Melbourne

Student Exercises

1. Read the passage, "The Modern Parable", and answer the following questions:
   (a) Reorganise the following statements into the order they appear in the passage:
   - production in the factory increased as the accident rate increased
   - the factory had a high accident rate
   - people realised something needed to be done about the accident rate
   - a clinic was built
   - an ambulance was purchased
   - the machinery was left untouched
   - a small hospital was built
   - churches became involved in helping.

   (b) Describe the risks people took by working in the factory.
   (c) Which one of the following statements communicates the message of the passage most accurately? Why?
   - Factories are places where production is casualty free.
   - Factories consider the working conditions of its employees.
   - The real cause of the people's injuries was not being addressed.
   - The hospital was helping to save people's lives.
   - Prevention is better than cure.

2. Do you think the story is about a factory located in your local area? Why?

3. What do you think is the message of the large diagram?

4. Redraw the diagram to show what you think should be happening in the factory.

5. Why do you think the people in this factory did not strike over their working conditions?

6. Rank the statements below according to what you think the factory managers value in the factory. (Number 1 would be what the factory managers value the most down to Number 6 being what the factory managers value the least.)
   - Safe working conditions
   - Creating a good public image
   - Helping outside organisations
   - Production increases
   - Employee satisfaction
   - Making a profit

Continued on page 81

THE GLOBAL ECONOMIC SYSTEM

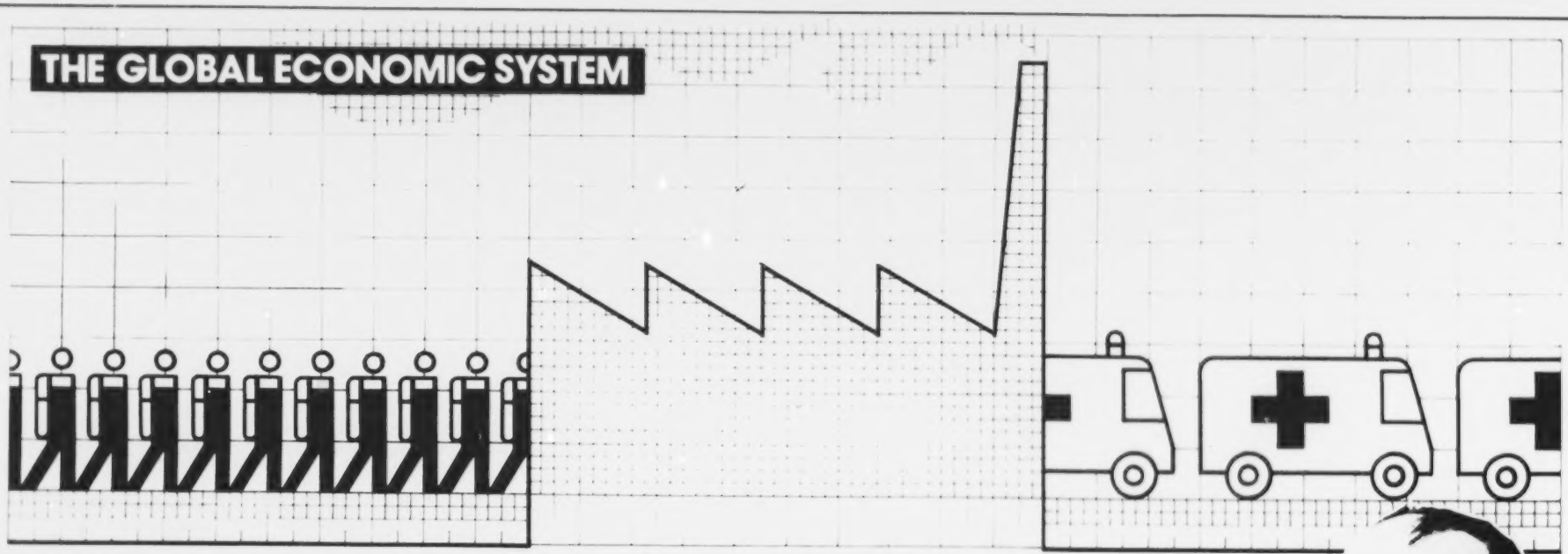


Illustration Hector Cantolica

The casualties . . .

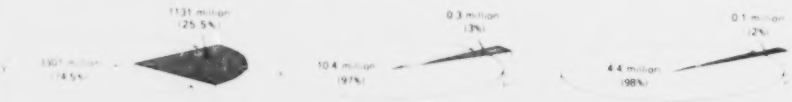
World population = 4432 million

2,000 million live on incomes below $500 per year.
870 million adults cannot read or write.
600 million have no jobs or are less than fully employed.
120 million children are unable to attend primary school.
450 million suffer from hunger or malnutrition.
10.7 million babies die every year before their first birthday.
42 million people are blind or nearly so.
2,000 million do not have safe water to drink.
250 million live in urban slums or shanty towns.

KEY

Developing countries

Developed countries



WORLD POPULATION
4432 million

ANNUAL INFANT DEATHS
(0–11 months)
10.7 million

ANNUAL CHILD DEATHS
(1–4 years)
4.5 million

Source: United Nations Demographic Estimates July 1983 and World Military and Social Expenditures 1983

'WHEN I give food to the poor they call me a saint. When I ask why the poor have no food they call me a communist'

DOM HELDER CAMARA
Archbishop of Recife
North East Brazil

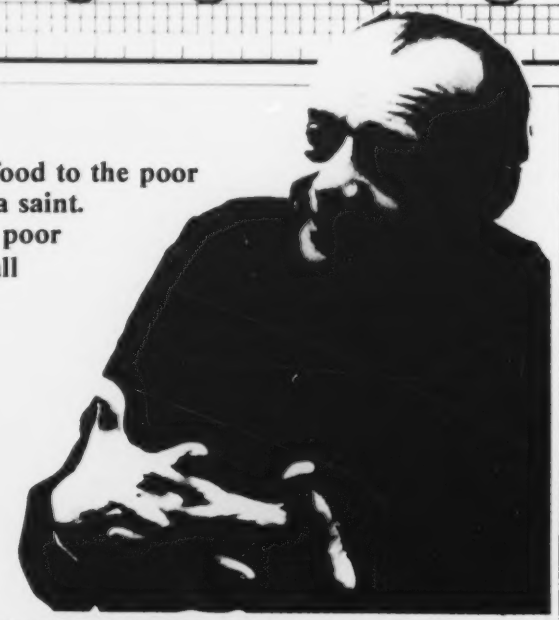


Photo Catholic Pictorial

3

One link in the chain

IT was still and dark when Pak Ali's family stirred itself. The first call of the muezzin was already over, sleepy prayers had been said. The familiar noises of the cicadas, croaking bullfrogs and squawking chickens around the *rumah* confirmed this was rural Malaysia. The dark wooden house, on stilts to catch the breeze, had its shutters thrown open revealing the soft glow of kerosene lamps inside.

In a fast-changing country, the traditional rice farming ways were still followed in this region. It was true that a secondary school had been built in their quiet *kampong* village. But Pak Ali and Saleena his wife were too old for school. Their day would be spent in the *padi* fields – like their parents and their grandparents before them.

Two of their boys slipped on school uniforms, grabbed battered exercise books and jumped down the steps. The rest of the family squatted down to a hurried breakfast of glutinous rice and coffee. Then, with Awang their buffalo securely hitched to the cart, mother, father, eldest daughter and youngest son set off for another day's work in the sun, the roughly-built wooden cart creaking on its salvaged car axle.

The parents walked ahead along the banks that divided the fields. They met neighbours and exchanged greetings. Brown faces creased into smiles of recognition and welcome. All were converging on one field to work in *berderau*. It was co-operative working, in groups of ten to twenty: first planting, then harvesting each other's crops. Working in teams helps lighten the back-breaking monotony. Confidences are exchanged, family problems shared. And the *berderau* system is not just confined to the fields. Help from the rest of the village could be relied on if illness or death touched any local family.

At the end of the day the sun slipped behind the coconut palms and gelam trees, turning the leaves to gold. The sight was lost on the family. Tired, greasy with sweat and dirty from cutting and winnowing the rice stalks, husband and wife swung a full gunny sack of padi over the tailboard of their cart. After decorously adjusting their sarongs they followed the buffalo cart home. And they still found pleasure in the model kites with their long paper tails: soaring, swooping, spiralling in the air currents, colours caught in the last rays of the sun. More than toys, the kites flew over the fields with a purpose. Owners tied them to stakes to flutter like eagles – to frighten the rats at night.

Whether it worked or not Pak Ali wasn't sure. But something had to be done about the rats. They could decimate the fields, eating three-quarters of the crop. Harvests were always a race between the villagers, the rodents and the insects. Still, the forces of nature were roughly in balance in their region. Bullfrogs, birds and catfish in the flooded padi fields, all reinforced the kites by scaring or preying on every kind of flying and crawling pest.

But Pak Ali had heard things were different in Kedah province. Talk in the coffee shop was about a green revolution, new types of rice seedlings, chemical pesticides that poisoned the catfish, mechanical rotivators and expensive petrol. And worst of all, the brown hopper disease. Kedah was barely a hundred miles away but it sounded like a different country. He knew that his rice grown by his hand on his own land – without poison or chemical – would taste sweet indeed.

Background material from Utusan Pengguna, Malaysia

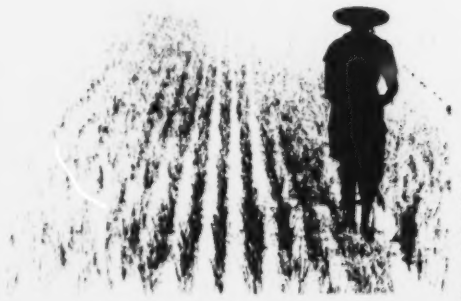


Photo: F. Botts/FAO

Source: *New Internationalist Calendar*, February 1987
By Ros Hall, Pascoe Vale Girls High

Student Exercises

1. Read the article, "One Link in the Chain", and answer the following questions:
   (a) Describe the transport and farming methods currently used by the Malay family.
   (b) (i) What is the "berderau" system?
   (ii) In what ways is this system different from farming in Australia?
   (c) Rats are a problem facing the farmers in this village.
   (i) What do they do about it?
   (ii) How are the rats normally kept under control within the ecosystem?
   (d) The passage says that "the only things that this family and village currently rely on for producing food are themselves and nature". Is this true? Give reasons to support your answer.
   (e) The family have heard rumours of changes being introduced into a nearby province in the form of a "green revolution"
   (i) From what they have heard, what good and bad things will this "green revolution" bring?
   (ii) Is Pak Ali looking forward to it? How can you tell?

2. Study the diagram, "Global Food Connections". From when food is first planted to when it arrives on the dinner tables of the world, food goes through many stages and many groups have an influence on what is produced. Use the information in the diagram to answer the following questions about five stages in the global food connection.

Stage 1: Agribusiness Suppliers
(a) Name some examples of the companies.
(b) What do they supply to farmers?

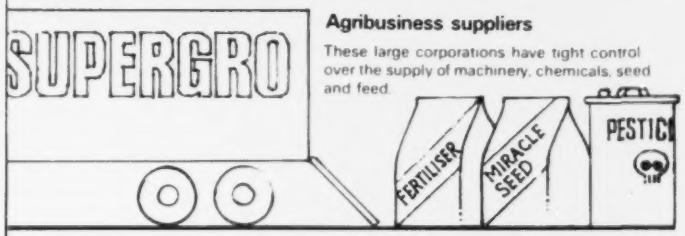
Stage 2: Farmers (the producers)
(c) Name the 3 types of farmers.
(d) What happens to the food that each type produces? (Would they eat it or sell it?)
(e) What problems are each group facing?
(f) Which of these groups do you think would produce the most food for world markets?

Stage 3: Agribusiness Middlemen
(g) What do these people do?
(h) Who are they linked to?

Continued on page 82

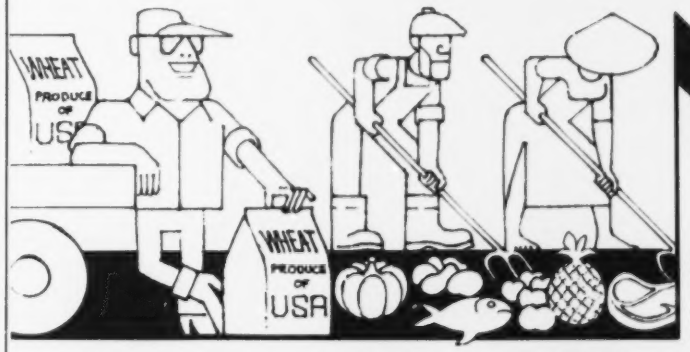
Global food connections

From the field to the shopping basket.
A guide to the main components of the world's food factory.



Agribusiness suppliers

These large corporations have tight control over the supply of machinery, chemicals, seed and feed.



Large-scale Western farmers

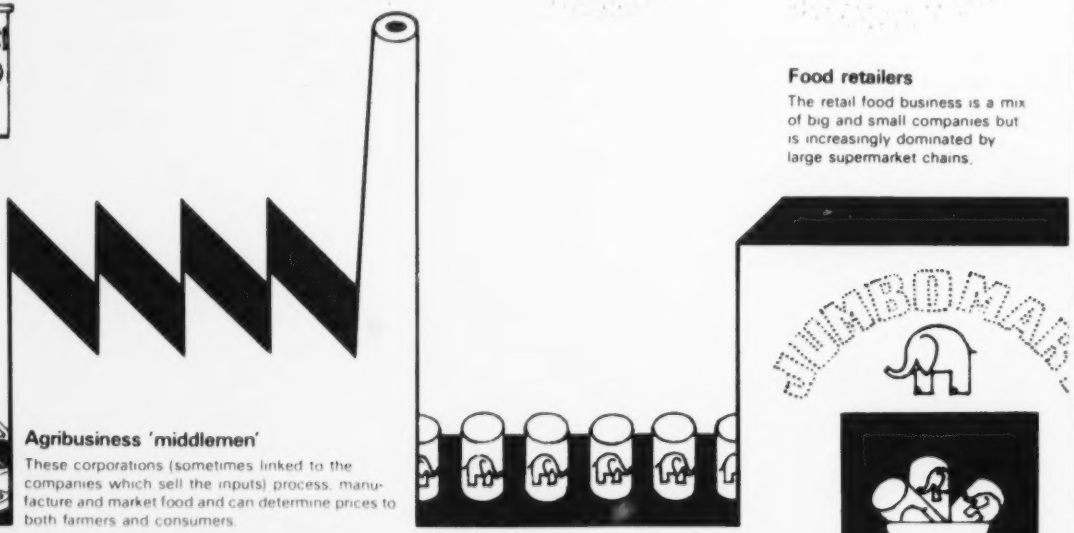
They are dependent on big corporations for inputs as well as for processing and marketing produce. Their debt load is increasing and profit margin decreasing.

Small-scale Western farmers

Their production is efficient but increasing costs and low net income mean they are having difficulty surviving.

Third World peasants

They are being cleared from their land for export crops and producing less food for their families.

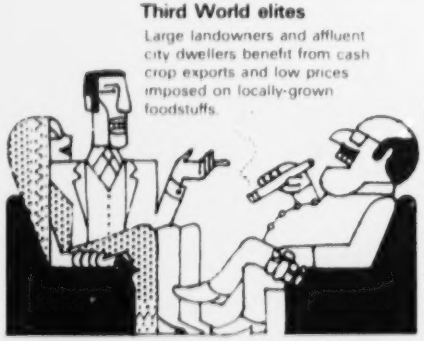


Agribusiness 'middlemen'

These corporations (sometimes linked to the companies which sell the inputs) process, manufacture and market food and can determine prices to both farmers and consumers.

Food retailers

The retail food business is a mix of big and small companies but is increasingly dominated by large supermarket chains.



Third World elites

Large landowners and affluent city dwellers benefit from cash crop exports and low prices imposed on locally-grown foodstuffs.

Consumers

The final stop in the food factory. Like the farmers they have the least power. Food quality, price and availability are determined outside their control.

4

Why don't they help themselves?

'THIRD WORLD POVERTY?' said the man at the bus stop. 'People like you always go on about that. But why can't they help themselves?'

We'd exhausted the weather and rising prices and, when the bus still showed no sign of coming, we'd fallen to talking about something important. He was in his sixties, and had a dapper little moustache that seemed to change shape as he spoke.

'They try.'

'Then why do we have to give them all this aid when we're in such a bad state ourselves?'

'But we don't give them much . . . and besides . . .' I spluttered into silence. I didn't know the facts well enough. Besides, the bus was coming round the corner at last – the moment was gone.

The truth, I learnt later, is that against all the odds the people of the poor world *are* helping themselves – they finance three-quarters of their own development by their own work and earnings. But the dice are loaded against them. The worst economic recession in over 50 years has been trouble enough to us in the West, but it is crippling the economies of the Southern continents. Take inflation, for instance – it averages six per cent in the rich world, but stands at 34 per cent in developing countries.

What's more, the problems of the poor South are largely due to their relationship with us in the North. The world powers encouraged their colonies to concentrate on producing one or two commodities, and they have found it impossible to diversify since independence – 90 per cent of Zambia's exports are copper, for instance, and sugar is 90 per cent of the exports of Mauritius. This leaves them totally dependent on prices in the international commodity market, which are now at their lowest in real terms since the 1930s.

Even in normal times commodity prices fluctuate wildly from year to year, making it impossible to plan. Sugar prices rose from 17.5 cents a kilo in 1970 to 104.5 cents in 1974, then plummeted to 22 cents in 1977. Yet the rich world refuses to buy the poor countries' raw materials at set prices and set times, which would really give them a chance to plan for the future, knowing how much they would make and how much they could spend. Meanwhile, in order to progress, the Third World has to import manufactured goods which become more and more expensive. Tanzania had to export twice as many bales of sisal in 1976 as it did in 1974 to buy the same farm tractor.

Wherever you look the poor world is frustrated in its desire to help itself. The decisions that control their destiny are taken far away on the floors of commodity markets and in the boardrooms of multinational companies.

Now that I've got this clear, I'm hoping to meet the moustached man at the bus stop again.

Source: *New Internationalist Calendar*, July 1985
By Ian Kelly, Tasmanian State Institute of Technology, Launceston.

Student Exercises

1. Study the passage, "Why Don't They Help Themselves?", and answer the following questions:
   (a) Define, with the help of a dictionary if necessary, the following terms used in the passage: Third World, aid, development, economic recession, inflation, developing countries, colonies, commodities, international commodity market, real terms, raw materials and multinational companies.
   (b) Account for the author's reference to the same people as "us in the West" and "us in the North".
   (c) How many times faster (on the average) do prices rise in developing countries than in "the rich world"?
   (d) How, according to this passage, did some countries become so dependent on one or two items of production?
   (e) Why do some countries suffer so severely from price fluctuations on the world market?

2. Study the 4 boxes headed "Barriers to Independence".
   (a) What is a country's Gross National Product?
   (b) What are OPEC and OECD countries?
   (c) Rank the aid-giving countries listed from smallest to largest in population size. Does it appear that small countries are likely to be more generous than large countries in giving foreign aid?
   (d) How can a patent operate to restrict local manufacture?
   (e) Which year has been the best since 1950 for commodity-exporting countries? Is the general trend improving or worsening?

3. To which type of economy (developed or developing) does the author belong? How do you know?

4. (a) Who, in your opinion, is represented by the man at the bus stop?
   (b) What, in your opinion, does the man at the bus stop mean by "people like you"?

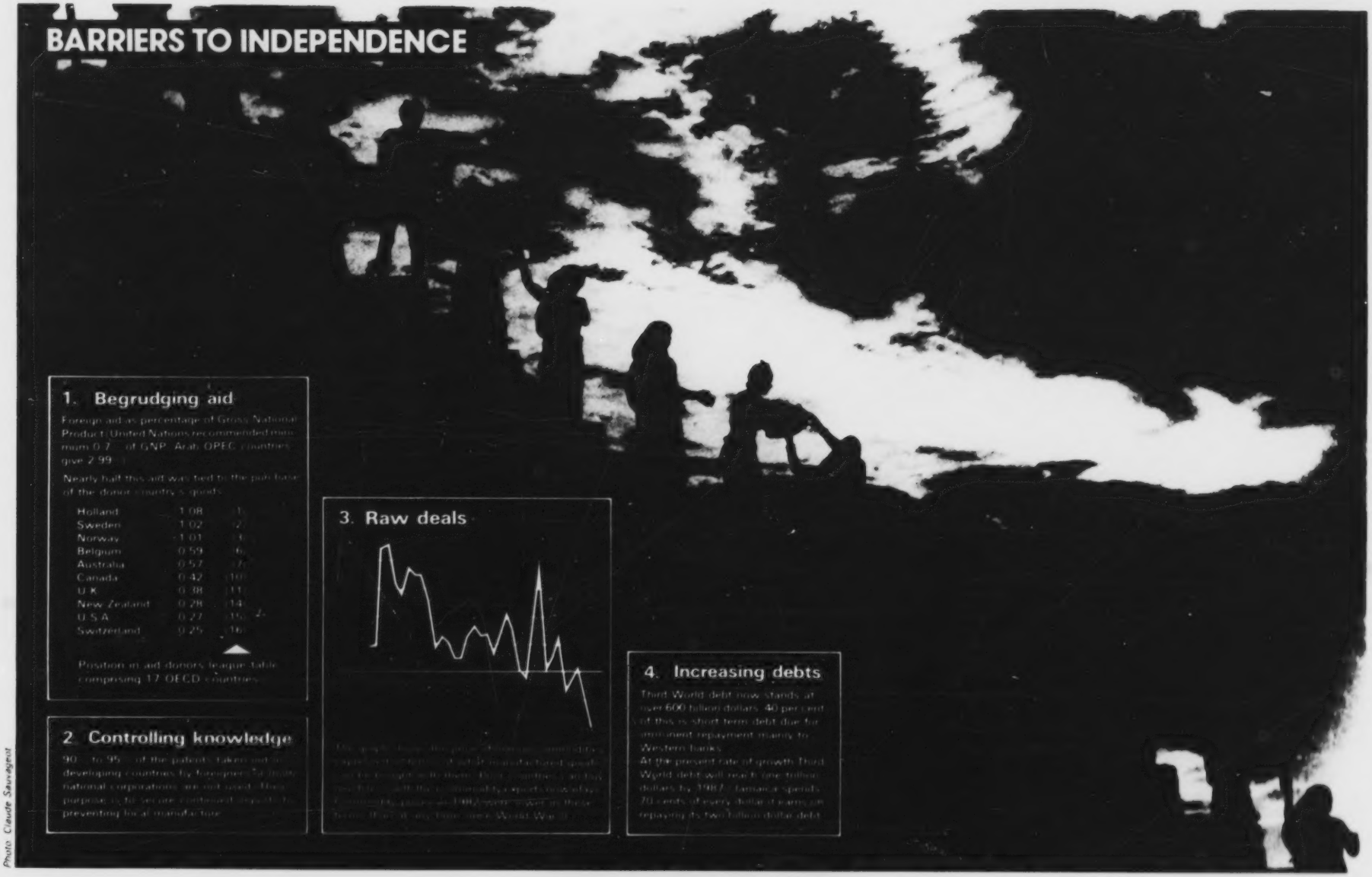
5. Is the statistical information given here useful today? Explain your answer.

6. Is Australia one of the "Southern continents" whose economy is crippled by recession? Explain your answer.

7. (a) Suggest reasons why colonies were encouraged to produce only one or two commodities.

Continued on page 83

BARRIERS TO INDEPENDENCE



1. Begrudging aid

Foreign aid as percentage of Gross National Product: United Nations recommended minimum 0.7% of GNP. Arab OPEC countries give 2.99%.

Nearly half this aid was tied to the purchase of the donor country's goods.

Holland	1.08	1
Sweden	1.02	2
Norway	1.01	3
Belgium	0.59	6
Australia	0.57	7
Canada	0.42	10
U.K.	0.38	11
New Zealand	0.28	14
U.S.A.	0.27	15
Switzerland	0.25	16

Position in aid donors league table comprising 17 OECD countries

2. Controlling knowledge

90% to 95% of the patents taken out in developing countries by foreign-based multinational corporations are not used. Their purpose is to secure continued imports by preventing local manufacture.

3. Raw deals

4. Increasing debts

Third World debt now stands at over 600 billion dollars. 40 per cent of this is short term debt due for imminent repayment mainly to Western banks.

At the present rate of growth Third World debt will reach one trillion dollars by 1987. Jamaica spends 70 cents of every dollar it earns on repaying its two billion dollar debt.

Photo: Claude Sauvageot

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5

Tricks of the trade

SO primitive!'

'?' Mustapha looks nonplussed.

'All this! These salt workings, these donkeys, these people slaving away, earning next to nothing'

'I know. But what do you expect us to do about it?'

'Industrialize! Create your own manufacturing industries so that you can compete on the world market. That's the only way poor countries like yours can really develop'

'And where do you expect us to get the money from?'

'We'll lend it to you. Then you'll be able to build roads, dams, power projects, factories . . .'

'Oh yes?'

'Sure. There will be certain conditions, of course. Like you will have to use our technology and hire our experts. That kind of thing.'

'Mmm. And what about the interest rates?'

'Low. Since the oil crisis we've got more 'petro-dollars' floating around the Western banking system than we know what to do with.'

'I appreciate your problem . . .'

'No doubt about it. The 1970s are going to be *the* decade for developing Third World economies!'

Ten years later, Mustapha and the Western Expert meet again, outside a new, but already shut-down, shoe factory.

'Do you remember . .?' Mustapha begins tentatively.

'Yes, well, things haven't quite worked out as we expected . . .'

'You bet. I'm out of work, my children have no food in their bellies and the government calls it 'austerity.'

'Mmm.'

'The rich countries are calling in their loans and we can't even pay the interest on them. The International Monetary Fund says it will only help us if we do exactly as it says. That means letting prices soar while wages freeze. Starving our children to pay back the banks, in reality.'

'Well, you know it's a hard time for everyone. It's the world economic recession. We have our own problems back home . . .'

'It wouldn't be so bad if trade were better. But now that we are actually getting somewhere with producing manufactured goods, the rich countries have imposed import tariffs, or outright bans on our products. What's happened to the *trade liberalization* you like to preach?'

'We have to protect our own manufacturers. We can't have cheap foreign imports undercutting domestic industry. But I don't know what you are complaining about. You are still selling a lot of raw materials to the West.'

'Oh yes, and who controls the prices? When we try to get a reasonable price for a commodity like copper, for instance, the US threatens to release its stockpiles on the international market and forces the price down again.'

'Well, who needs copper anyway? We used to use it for telecommunications, but today the systems are all computerized. Now there's an idea! Maybe that's what you guys should be getting into: computer technology! Then you could really . . .'

Source: *New Internationalist Calendar*, May 1988

By Stephen Codrington, St. Paul's Grammar School, Penrith

Student Exercises

1. Read the passage, "Tricks of the Trade", and answer the following questions:
   (a) What are the jobs of the two people who are talking together?
   (b) "So primitive!" said the Western Expert when he saw the donkeys, the long hours and low wages. Why do working conditions in the Third World often seem "primitive" when seen by Westerners?
   (c) Is it fair that Western countries who are lending money should impose conditions on the loan, such as using technology and advice from the lending country? Explain.

2. Third World countries seem to have lots of labour but little money. Western industrialized nations seem to have lots of money but less labour. Is it really sensible, therefore, for Third World countries to industrialize in the way the Western Expert suggest. Why?

3. What kind of industrialization would suit Third World countries best? Why?

4. Do you think the Western Expert is really trying to help Mustapha's country? Give evidence from the passage to support your opinion.

5. Would Third World countries be better off with their traditional so-called "primitive" industries? Why?

6. Study the information in the large diagram, "International Trade".
   (a) Why do poor countries need to earn money from exports?
   (b) What proportions of their development is financed by Third World countries, themselves?
   (c) What problems arise because most Third World exports consist of raw materials, or "commodities"?
   (d) Consider the heading "Ill Winds for Fair Trade". What is "fair trade", and what are the "ill winds" which change "the ideal" to "the reality"

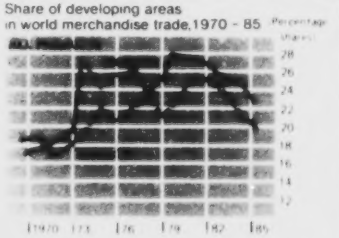
7. Look at the 8 boxes of information around the left and bottom of the diagram. If you were designing this page and had to give the most important box the largest amount of space, what box would you emphasize by making biggest? Write 5 lines to explain why.

Continued on page 83

INTERNATIONAL TRADE

Poor countries need money to buy goods from abroad which they require for their own development. Trade is therefore vital. Third World countries already finance 80 per cent of their development from their own work and their own trade earnings.

Share of developing areas in world merchandise trade, 1970 - 85



But the developing countries' share of world trade is declining. Their exports are mainly raw materials – or 'commodities' – and values of these have fallen by one fifth in real terms during the past five years. It means that they have to sell 20 per cent more coffee, cotton or minerals to buy the same number of tractors, water pumps etc.

Also the demand for Third World minerals and crops is uncertain. Developed countries are spending more than $1,000 million a year on research into human-made substitutes for natural products.

Many poor countries have therefore put their energies into industrializing, with the help of foreign loans, to produce manufactured goods not so vulnerable to unstable commodity prices.

Ill winds for fair trade

The ideal . . .

The reality . . .

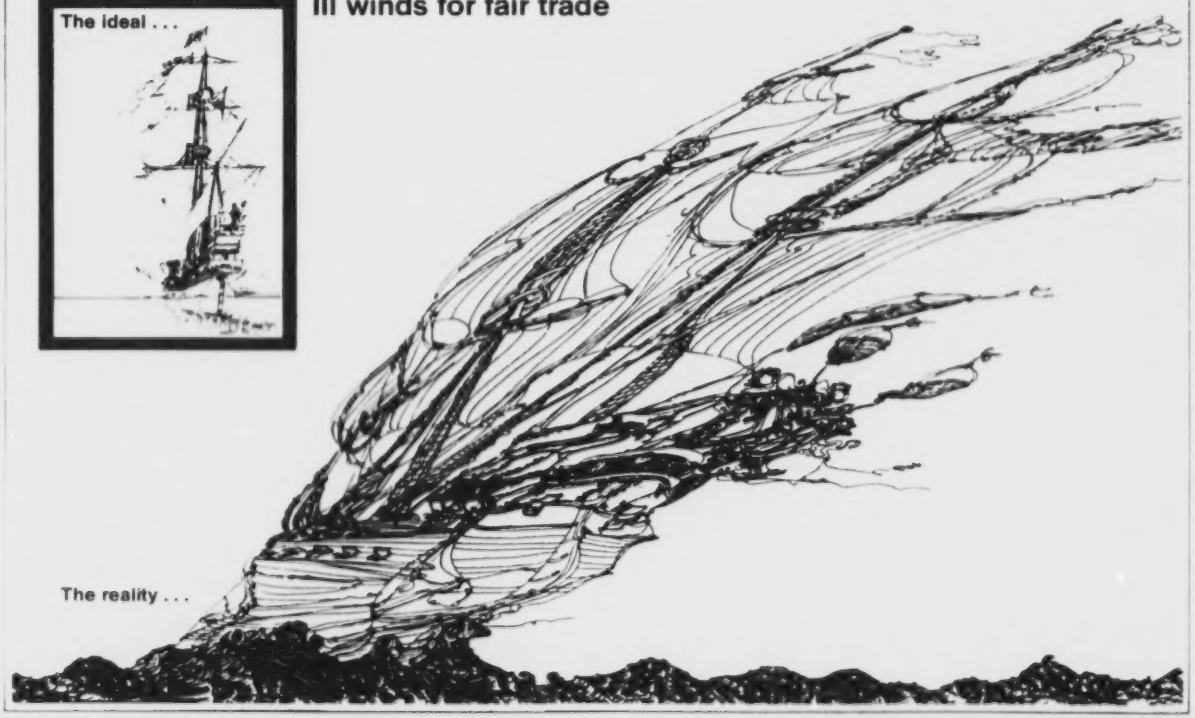
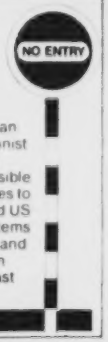


Illustration: Hans Georg Rauch

But the world economic recession of the 1970s and 1980s has led to an alarming upsurge of protectionism amongst the richer countries. The European Community's protectionist agricultural policy has made it virtually impossible for Third World countries to sell food to Europe and US bans on the import of items such as steel, textiles and footwear have hit Latin America and South East Asia hard.



Official development aid to poor countries should, in theory, help. But most of it takes the form of government to government loans, tied to political or economic conditions. The US, for example, cut off aid to Chile under Allende, but resumed it generously as soon as Pinochet seized power. Also, much of the aid is aimed at helping companies belonging to the rich countries – 80 per cent of West German aid to developing countries is allocated in this way.

The interest poor countries have to pay on their debts to Western banks means they are exporting the money that they so desperately need for their development. The Third World foreign debt is one million million dollars (1986) – that is as much as the total value of the exports of the US, EEC, Canada, Australia and Japan combined.

In order to survive the crisis poor countries will have to:

- Develop strong OPEC-style cartels to bargain for better and more stable prices for their commodities. This has proved difficult so far.
- Trade amongst themselves. South-South trade is seen by many as the only solution.
- Increase self reliance by developing their own import substitution industries.
- Dramatically reduce imports of all but the most essential items – that will mean cuts in weapons systems and luxury goods.

6
Running the gauntlet

WHEN an earthquake struck Mexico City in September 1985 there was some doubt as to whether the World Cup Final could still be held there. But the stadium was intact.

On 20th September 1985, Catarina Gomez was pulled from the rubble with a broken arm, but still alive and within a week she was discharged from hospital with a new set of donated clothes and a handful of money, given by foreigners for 'rehabilitation'.

Not knowing where else to go she found her way back to the smashed apartment block in which she used to work, and where she had been staying on the night of the earthquake. Thrown out of her village house by her husband some weeks before, she had nowhere else to to stay.

'Señora, it is all destroyed, my whole life.'

A plaintive voice broke upon her thoughts.

For a moment she glanced up at the man who used to run the workshop, then again at the shattered concrete. Somewhere among those broken blocks were the old sewing machines on which they stitched garments.

'The Government will pay you,' she said. 'Soon you will start again.' Wearily, instinctively she fell back into the role of shouldering the worries of men . . .

'Ha – you say so? They will pay nothing. Nothing is registered, nothing official. The owner of the house will claim his money. The big mills will be rebuilt, but not this little place. They will say they do not know me. Only the merchant who lent me money will remember . . . You have money Señora?'

'Something from the Government'.

'I lent you money when you came from the village. Remember?'

It was as if, through the rubble, she could see the smashed sewing machines, like her own life, pressed down under the weight of debt and poverty.

'What about my job?' she asked.

'It is gone. You were not registered.'

For her husband, Guillermo, it had been just the same, when the paint factory had closed. The government tried to protect the little factory as it grew but in the end they were forced to allow the Americans into the market, otherwise the foreign bankers would have stopped giving loans. For a few years the Americans sold at a loss until the small local factory had to be closed down and Guillermo was left unemployed. He became angry and bitter. Finally he took to beating her.

'Take the money,' she said. He counted the notes carefully and gave her back the smaller share.

'If I did not pay you,' she said, 'and you did not pay the merchant, and the Government did not pay the foreigners, then indeed the earth would shake . . .' But already he had walked away.

In the end Catarina was lucky. She got a job polishing the seats at the stadium in readiness for the Cup Final. She was quite well paid, for the International Monetary Fund had decided to give Mexico a further loan, bringing the amount that Catarina, like all other Mexicans, owed the world to around 1500 dollars.

There is no chance of it being repaid. Mexico, like Catarina, lurches from one crisis to another. The only way out would be for the debtors all together to stop paying – but that in itself would cause an earthquake.

by Tony Vaux

Source: *New Internationalist Calendar*, October 1987

By Julie Smith, Moreland High School, Melbourne; Marilyn Wiber, Mentor Girls Grammar School, Melbourne; and Magdeline Wong, Craigslea High School, Brisbane

Student Exercises

1. Read the passage, "Running the Gauntlet", and answer the following questions:
   (a) What was the natural disaster which struck Mexico City in September 1985?
   (b) What happened to Catarina Gomez in this disaster? From whom did she obtain clothes and money?
   (c) Which of the following best describes Catarina's previous place of employment? On what evidence do you base your decision?
   - Modern hygienic locally owned factory.
   - Large modern factory owned by a multi national company.
   - Unofficial sweatshop in a village house.

   (d) Why did Catarina's former employer demand money from her?
   (e) Why did Catarina give him the money? What did she get in return?
   (f) Would you have given him the money? Give reasons for your answer. (This could be a possible class discussion)

2. (a) What happened to the local paint factory?
   (b) How could the Mexican government protect a local paint factory from American competition?
   (c) What reasons would the Mexican government have for this protection?
   (d) Why was the Mexican government forced to allow the American company into the paint market?
   (e) What was the effect of the Americans "dumping" paint on the local market factory?
   (f) What were the personal repercussions of this for Catarina and her family?

3. (a) Where did Catarina finally get a job?
   (b) What organisation provided the funds for this job?
   (c) What is the International Monetary Fund? What countries control it?
   (d) Why is there little chance that Mexico will be able to repay its debt to the International Monetary Fund?

4. Imagine you are Catarina at the scene of the earthquake. A media person approaches you and thrusts a microphone in your face. In pairs, write the script as you imagine Catarina would reply to the question.

   Media person: "Senora, how do you feel about what has happened here?"

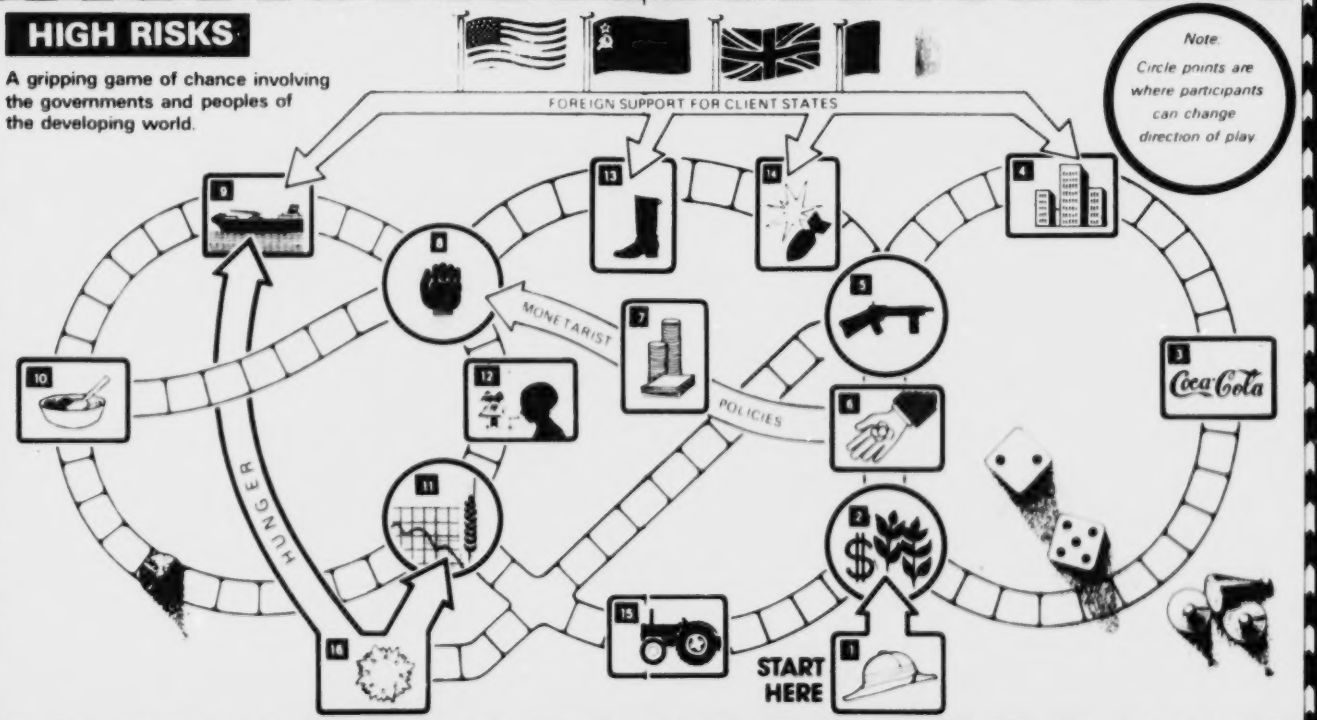
   Catarina (wringing hands): .....

   Read your play out to each other, in turn, and to the rest of your class.

Continued on page 84

HIGH RISKS

A gripping game of chance involving the governments and peoples of the developing world.



START HERE

1 Colonialism: One result of nineteenth century colonialism was the forced development of cash crops to meet the ruling country's needs – for primary goods like cotton or minerals for its factories.

2 Development of cash crops: The need to pay for imports and for the repayment of loans brings government encouragement of cash crops, usually on the best farming land.

3 Overseas corporations: A high proportion of trade in primary products is controlled by multinational corporations, who dictate the price paid for the products. They also control much of the local economy and culture.

4 Development: There are broadly two forms of development. One involves ordinary people, ensures that changes fit their own culture, meets their own needs and uses technology which they can control. The other form is based on Western technology and imposes foreign solutions.

5 Arms imports: Over the last 20 years developing countries have imported weaponry worth $223 billion, equivalent to three quarters of all arms imports in the world.

6 Debts: Almost all Third World countries are heavily in debt to the Western banks and governments. In 1983 they paid the West $21 billion on debt servicing – seven billion more than they were able to borrow that year.

7 Loans from the IMF: Countries that cannot service their loans and need extra time generally talk with the International Monetary Fund. The IMF is dominated by the USA and other Western industrialised nations which insist on an 'austerity budget'. The effects on the poor are serious.

8 Urban unrest: The gradual destruction of the economy brings disaffection, and can provoke unrest. Rioting in the city leads to publicity and pressure on the government to do something.

9 Overseas aid: Help takes many forms. The most valuable supports the local economy. Less helpful is aid for sophisticated foreign machinery, aid as business investment or aid as a loan.

10 Cheap food policies: It is easier to riot in the towns than the country, so governments try to keep townspeople contented. One way is through cheap food. Some may be imported, the rest comes from the rural areas.

11 Drop in food production: By 1985 Africa was producing only 91% of the food it grew in 1975, an average year. In contrast, both Asia and Latin America were growing substantially more over the same time span.

12 Rural unhappiness: widespread hidden hunger. Farmers are forced to accept low prices for their crops from government to feed the towns.

13 Repression and military rule: Faced with increasing unrest, governments resort to repression and military rule. By 1985 out of 114 independent developing states, 57 were controlled by the armed forces.

14 War: There have been around 120 wars since 1945. Almost all have been in the Third World, and most have been civil wars – at least in part. In 95% of these conflicts there has been outside intervention, mainly by the superpowers.

15 Migration to cities: Tractors are displacing farm workers and the rural unemployed are moving into towns. In 1985 31 per cent – more than a billion – people lived in Third World cities. By 2000 AD this will be two billion.

16 Drought and other disasters: There have always been natural disasters. The present disasters however, hit people already weakened by cycles of exploitation and the effects are much worse.

From an idea originally developed by R. A. Forder

7

Barefoot business

QUICK! Abdul scurries down to the river, a bundle of dirty washing from the Hotel Imperial clutched under his arm. Too late! The best stones are taken. He enters the water, trips, stumbles, bumps into the others crowding the shallows. Watch it! They continue hectically scrubbing. Competition is as fierce as that midday sun burning up above. You have to eke out a living anywhere you can, any way you can, as fast as you can.

This is just a glimpse of the informal sector in action. Bustling, enterprising and strictly speaking illegal, it is the world in which more than half the working population of developing countries lives.

The shoeshine boy, the cigarette hawker, the woman making sandals out of old rubber tyres, the mechanic operating from his roughly dug pit by the roadside, the family atop the municipal rubbish dump carefully picking out any resaleable objects. All are living by their wits, on the fringes of the national economy, on the edge of survival.

Hard facts and figures are hard to come by. How do you classify the unclassifiable, record the hidden? But one thing is certain. The legions of 'barefoot' businessmen, women and children are growing daily, faster even than the cities most flock to for work.

They are not pursuing dreams of riches, just survival. Earnings can be very low indeed. A survey in Lima showed that three quarters of street vendors were earning less than the government's minimum wage. This is because there are far too many informal sector workers chasing too little work, and there is not enough spending power among their customers who are by and large poor like themselves.

Vulnerability goes hand in hand with informality. There is no social security. No trade union protection. No credit to fall back on during hard times. But no tax to pay either, which means that their governments are out of touch with the greater part of the nation's economic life.

Barefoot businesspeople, desperate for work, are wide open to exploitation by richer parts of the economy. The formal sector, for instance, sub-contracts piecework out to them at virtually slave-labour rates of pay.

Harassed or at best ignored by governments, the informal sector has nonetheless achieved what international development agencies and finance bodies most applaud – flexibility, a keen eye for the market, entrepreneurial self-help, and the pioneering of appropriate technology.

A little more imagination exercised by those in power – and a lot less red tape – could harness this great force of human inventiveness and adaptability to the general benefit of all.

Source: *New Internationalist Calendar*, July 1988

By Margaret Calder and Roger Smith, South Australia College of Advanced Education, Adelaide

Student Exercises

1. Read the passage, "Barefoot Business", and discuss the following questions in groups:
   (a) What words can you identify that are often used by economists to describe the work of these people (eg minimum wage, spending power)? Underline or highlight the words and decide on a group definition for these words. Write down the definitions and then compare them with those of other groups. Can you decide on class definitions for these words?
   (b) What does your group understand by the word "marginalized" which is often used to describe informal sector workers? List words or phrases which identify as many ways as possible that these people are working at the margins of the economy. As a group choose one sentence or paragraph which you all think sums up the phrase "these people have a slender toehold on life".
   (c) What would Third World governments find out if they are suddenly able to record accurately the economic contribution of these people to their city's or country's wealth?
   (d) List the three most important things that your group learnt about workers in the informal sector. Compare your list with other class groups. Make up a class list on a large sheet of paper. Display this class list as a series of statements arranged around the article "Barefoot Business".

2. (a) Use a map of the world to locate the cities (in the six paragraphs on the large diagram) and the countries in which they are found. Also, mark any countries named in these paragraphs.
   (b) Around the map write in the relevant phrase or sentence which describes the informal sector situation for each place marked.

3. Form into groups of six students. Each student should choose one of the paragraphs in the large diagram, and use sketches and/or written passages to describe what it is like to:
   - Live in a "shanty town"
   - Be a "pioneer of intermediate technology" (check with the teacher or other members of your group if you are not certain of the meaning of the term "intermediate technology"
   - Learn "street wisdom" instead of attending formal school, or
   - Work in a "sweatshop"
   - Go "legal" in a Third World city
   - Work for an electronics firm which puts out work to women.

Continued on page 86

WORK: THE INFORMAL SECTOR

Photo: Maggie Murray-Kornel

Without 'barefoot' businessmen, women and children many Third World cities would quite literally grind to a halt. Lima, for example, relies upon the informal sector to provide 80 per cent of its public transport, while 'illegal cities' or shanty towns provide the majority of housing for the people of Lagos and Mexico City.

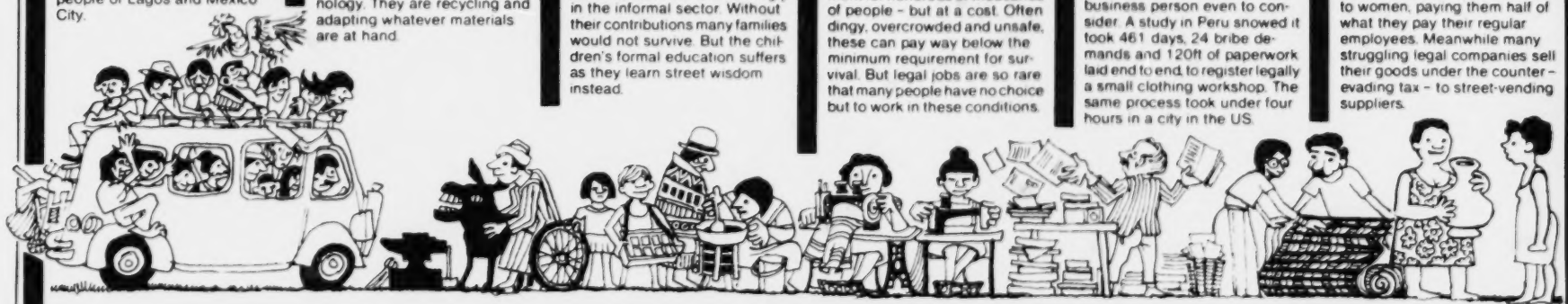
The garbage pickers of Cali, the donkey-bridle-out-of-bicycle-chain-makers of Ouagadogou, the kettle-out-of-tin-can-makers of Bombay are all spontaneous pioneers of intermediate technology. They are recycling and adapting whatever materials are at hand.

Kids hawking cigarettes, women selling cooked food on street corners, feature overwhelmingly in the informal sector. Without their contributions many families would not survive. But the children's formal education suffers as they learn street wisdom instead.

The sweatshops of the Third World provide illegal employment for hundreds of thousands of people – but at a cost. Often dingy, overcrowded and unsafe, these can pay way below the minimum requirement for survival. But legal jobs are so rare that many people have no choice but to work in these conditions.

Going legal is hard. In many countries the hurdles – bribery, corruption, bureaucratic red tape – are too awesome for a small business person even to consider. A study in Peru showed it took 461 days, 24 bribe demands and 120ft of paperwork laid end to end, to register legally a small clothing workshop. The same process took under four hours in a city in the US.

The formal and informal sector often overlap – with the former generally exploiting the cheaper, non-unionized labour workforce the latter contains. Mexican electronics firms 'put out' work to women, paying them half of what they pay their regular employees. Meanwhile many struggling legal companies sell their goods under the counter – evading tax – to street-vending suppliers.



8

An Athenian fable

A new report by Demographicos, a professor at Syracuse University in Ancient Greece, has forecasted a population explosion by the year 1 AD. A shocked Artemidorus has come to ask Socrates what might be done about it . . .

So, Artemidorus, the Professor fears that too many people are being born?

Right on. Far too many people are being born in Athens.

Too many Athenians? The noblest people in history? Is it possible to have too many Athenians?

Ah, but the point is that it is not the noble people of Athens that are doubling their numbers. It is the slaves.

Have female slaves started giving birth to quins or quadruplets? Has their period of gestation suddenly reduced to four months?

Socrates, please – this is serious.

Forgive me, Artemidorus, if I offend you. Tell me, are the families of slaves larger than they were 10 or 20 years ago?

They are smaller. But they are not dying as fast as they used to 10 or 20 years ago.

Oh ho, so it's not a question of too many births but too few deaths. Surely the solution then is to have another war with Troy?

Not in an age of detente, Socrates. Besides, such a solution would be against the principles of humanism to be propounded by Aristotle.

Then should we not reduce the number of slaves, having due regard to Aristotle's principle of humanism?

We should. How can we reduce the number of slaves without recourse to death?

Abolish slavery. Give the slaves all the civic rights and benefits we Athenians enjoy.

You are in danger of being hauled up before the Committee on Unathenian Activities, Socrates.

Are fair shares unathenian?

There won't be enough to go round if we share with the slaves.

So you refuse to let them die because you are humanistic but you will not share the means that will support their lives.

That's not fair. There is not enough in Athens to share with them.

Then let the slaves go.

Socrates, the world of slaves and our world are interdependent. We need slaves. Isn't there a humanistic alternative? What about persuading them to reproduce less?

I thought you said they are reproducing less than they used to 20 years ago.

But that isn't enough. They must be educated to realise that it would be catastrophic if they did not have zero population growth.

Catastrophic for whom? They are slaves and will continue to be slaves in 1 AD whatever the size of their families.

But it will mean a lower quality of life, Socrates. Surely it is reasonable for the State to insist on its citizens meeting their social obligations?

But slaves have no social rights, so how can they have social obligations? No, Artemidorus, you must share what you have with the slaves even if it means that what you call the quality of your life – which really means the quantity you consume – is reduced. Otherwise don't come complaining to me when Demographicos' explosion actually takes place.

by Tarzie Vittachi

Source: *New Internationalist Calendar*, January 1987

By Warren Halloway, Armidale College of Advanced Education

Student Exercises

1. Study the passage "An Athenian Fable", and answer the following questions:
   (a) Who prepared the population report and what position does he hold?
   (b) Who are the two people discussing the report?
   (c) At the beginning of the discussion one person states what he believes the problem to be. Find this statement and quote it.
   (d) What section of the Athenian population does Artemidorus consider to be mainly responsible for the threatening population explosion?
   (e) What changes have occurred in the size of families of slaves in the previous 10 or 20 years? Suggest reasons.
   (f) Why do you think the slaves are living longer? How will this affect the total population of Athens?
   (g) List the unacceptable solutions Socrates suggests. Which of these solutions is Socrates serious in suggesting and which are made in jest?
   (h) What alternatives does Socrates finally suggest to solve the problem?
   (i) Do you think the noble Athenians will follow Socrates' advice? Give reasons.
   (j) Imagine you are a slave owning Athenian. Why would it be important to you **not** to follow Socrates advice.

2. Script and perform a play reading based on "An Athenian Fable". Introduce and compose lines for a third character called Minus who is an Athenian slave from Egypt.

3. Socrates says the Athenians must abolish slavery and share what they have with the slaves or let them go, even if the quality of life is reduced. List what kinds of things might change for the slaves and the Athenians if slavery was abolished.

4. Australian Aboriginal people have high but declining birth rates. They are also living longer but still have a shorter life expectancy than other Australians.
   (a) What reasons can you suggest for high birth rate among Aboriginal people?
   (b) Why do you think the high birth rate is declining?
   (c) Why do Aborigines have a shorter life expectancy than other Australians?
   (d) What needs to be done to extend life expectancy among Aborigines?
   (e) How might State and Federal Governments in Australia improve the "quality of life" for Aborigines?
   (f) Would the granting of land rights to more groups of Aboriginal people improve their life chances? Why or why not?
   (g) How would the granting of more land rights to Aborigines affect other Australians?

Continued on page 86

POPULATION

Population growth is often seen as just the poor world's problem. But there are good reasons why people have large families. Birth rates are already falling and they will fall faster when the poverty of developing countries is relieved.

Birth and death

The size of a country on this map is determined by the average number of babies born in it each year between 1975 and 1980. The shading shows how likely those babies are to die in their first year of life

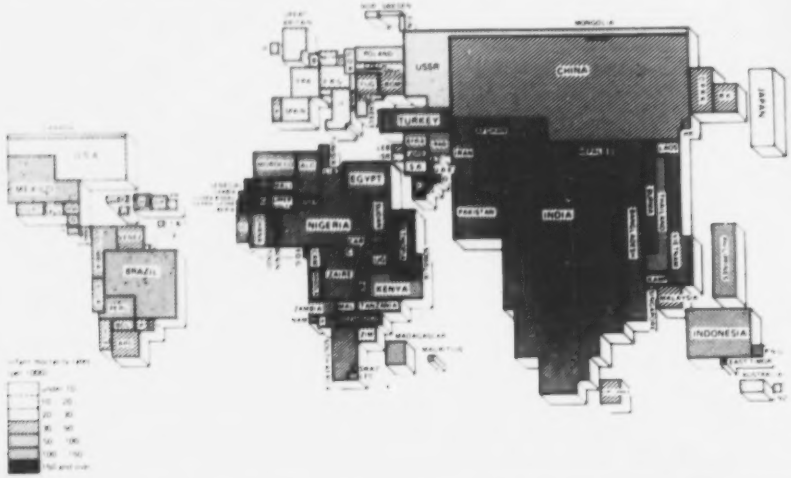


Illustration: David Eaton

World population growth is slowing down and will stop in the year 2110, according to the United Nations.

Top of the table

Countries with largest population

(1983, in millions)

1. China	1019	11. Mexico	75
2. India	733	12. W Germany	61
3. USSR	273	13. Vietnam	59
4. USA	234	14. Italy	57
5. Indonesia	156	15. UK	56
6. Brazil	130	16. France	55
7. Japan	119	17. Philippines	52
8. Bangladesh	95	18. Thailand	49
9. Nigeria	94	19. Turkey	47
10. Pakistan	90	20. Egypt	45

Population growth rates

(1983, in per cent annually)

Highest		Lowest	
1. Libya	4.1	1. W Germany	0.1
2. Kenya	3.9	2. Denmark	0.0
3. Jordan	3.8	2. Hungary	0.0
4. Congo	3.7	2. Switzerland	0.0
4. U.A.Emirates	3.7	2. UK	0.0
6. Ivory Coast	3.6	6. Austria	0.1
6. Saudi Arabia	3.6	6. Belgium	0.1
6. Zimbabwe	3.6	6. E Germany	0.1
9. Ghana	3.5	6. Italy	0.1
9. Kuwait	3.5	6. Sweden	0.1

Why people in the Third World have large families

High infant mortality

When one in four children dies due to diseases caused by poverty, so having more children is a sensible compensation.

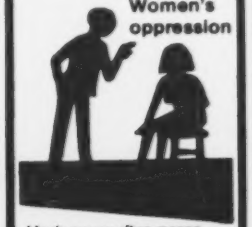
Security in old age

There are few welfare schemes in developing countries – the only way to safeguard your old age is to have children who will provide for you.

Boosting family

Children are not a financial burden to many people – they are a boon. They help in the fields when young, and later might get a job and share their wages with the family.

Women's oppression



Men's power often means women have no control over their own fertility.

No contraception

Many people – especially in the countryside – have not heard of contraception or have no way to acquire it.

The way forward

In the rich world population growth only slowed down as the quality of people's lives improved ... before the advent of reliable contraception. The population of many Western countries is virtually static. In the Third World the pattern is likely to be the same. Making contraception available is important but it is not a complete solution. People will not use it until their poverty is relieved. The quickest way to reduce population growth could be for the world's resources to be shared more equitably.

9

The shrinking circle

Njaya's story

WHEN the night was quiet and all her work was done, my grandmother would sometimes stare into the fire and tell us stories. We loved those times – just those few minutes before the round of sleep and the next day's work began again. She'd tell us tales of the village, of my uncles and cousins who lived in the same compound as us. And now when I have time I try to do the same for my children.

But so much has changed since those days. By the time I was 17 I'd married Kamau – he lived in the village on the other side of the valley but as children we'd often play together down by the river. He's a good man and I felt lucky to have him but we soon struck hard times. The rains failed and we had to sell our land to pay off debts. There was enough money left over to buy this little *shamba* but the soil is poor and dry. And I have to work on it alone – Kamau has gone to Nairobi where he works as a gardener in one of the big houses in the suburbs.

It means we only see him once a month at the most – he sends back money but if he came too often there wouldn't be any money to send. There's no other way, but he misses us and it makes the life here hard. I'm not complaining – I've been lucky with my children's health and at least we still have some land. But sometimes I remember my grandmother's stories and wish for the old life.

Julie's story

It was pouring with rain when I left my husband – just like it would have been in a novel. I bundled the kids into the car and drove to my mother's. By that time things were so bad between us that I don't think he cared very much – he drove round to shout at me the next day but I don't think his heart was in it any more. Because, you see, being thrown together within those four walls wasn't doing any of us much good – least of all the children. It's like we'd chosen to put ourselves into a box because that's what you're expected to do – to move from one family straight into another. All this pressure to live in the way that's expected – husband, wife and kids, the perfect family. Well it's not perfect. Now when I meet old friends and relatives it's as if they're sorry for me because my marriage is over, like I've failed because I'm not in 'a proper family'. They put me in a box marked 'sympathy' because I climbed out of one marked 'housewife'. But I'm so much happier. My mum and dad come to help with the children now, and they love to tell the kids about the times when I was young.

Source: *New Internationalist Calendar*, August 1986
By Sandra Hardwick, Adelaide College of TAFE

Student Exercises

1. Read the passage, "The Shrinking Circle", and answer the following questions.
   (a) In which country does Njaya live? How do you know?
   (b) From the section "Njaya's story" what do you think a *shamba* might be? Try to find a more accurate meaning of the word.
   (c) Julie climbed out of a box marked "housewife" and into one marked "sympathy". What label would you give to the "box" Julie's husband is in?

2. Do you know anyone who has a story like Julie's to tell. If you could relabel the "boxes" she was in ("housewife" and "sympathy"), what would you call them? Explain your choices.

3. How are Njaya's and Julie's lives similar?

4. On a map of Kenya shade in the area occupied by the Knsasi tribe of which Hamidou Anoka is a member.

5. Rank, in descending order, the countries with the highest number of divorces in 1981. How does this compare with the ranking in 1963? Suggest reasons for Australia's rise in the ratings.

6. The photograph of the family is incomplete.
   (a) What do you think the author is trying to show by this?
   (b) Is this an accurate picture of what is happening to the family in
      (i) Western countries
      (ii) Developing countries? (Give reasons for your answers.)

7. (a) Do you think that headings like "Removing the Ring", "Refusing the Ring", and "The Chosen Few" are suitable for the information given?
   (b) Why do you think the author chose these headings rather than "Divorce Rate", "Births outside Marriage" and "Family Size"?

8. What reasons are given to explain why women are having fewer children?

9. Is there evidence to suggest that smaller families are better? If so, describe that evidence and say whether you think it is likely to be true.

Continued on page 87

The family

We picture people in developing countries as being surrounded by an extended family – grandparents, uncles, aunts, cousins – all living with them and sharing the load. In fact the nuclear family is much more common. While in the West even the nuclear family is disintegrating as marriage ties loosen. The family is shrinking all the time.

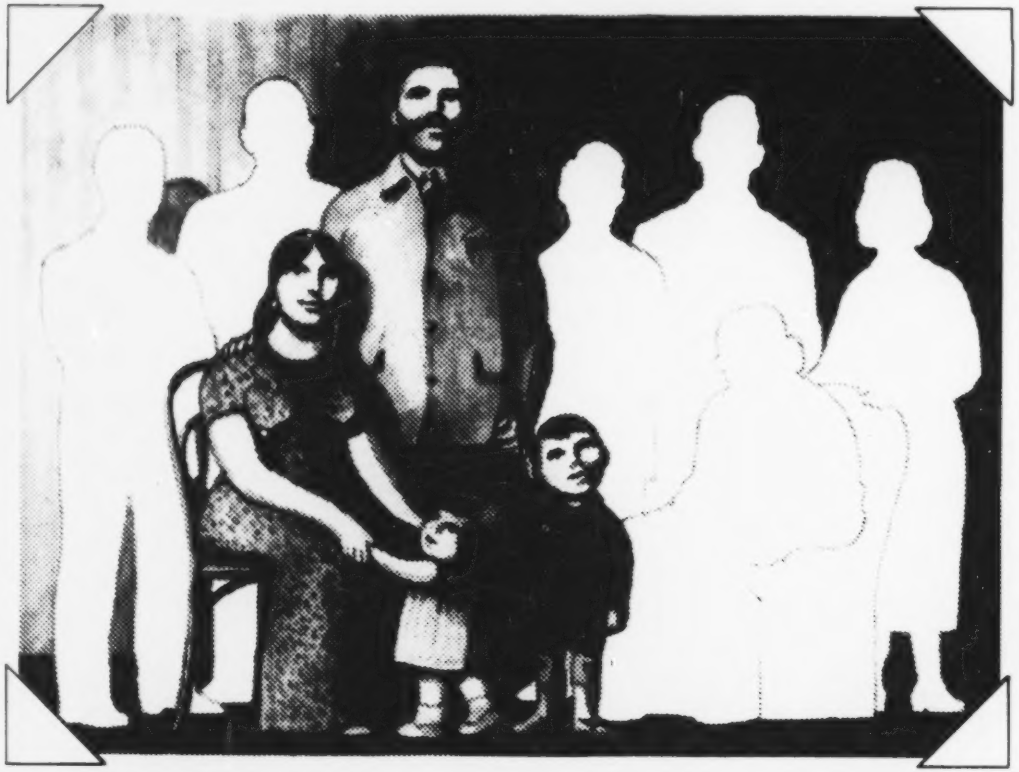


Illustration Hector Cattolica

Third World goes nuclear

	RURAL				URBAN			
	% nuclear family	% extended family	% family with no couple	average household size	% nuclear family	% extended family	% family with no couple	average household size
Bangladesh	71	13	16	6.4	70	15	15	6.0
Fiji	79	13	8	5.7	79	14	7	6.4
Indonesia	72	14	14	5.4	76	8	16	4.7
Jordan	81	7	11	6.8	77	8	15	6.6
Korea	74	4	22	4.6	72	12	16	5.2
Malaysia	66	16	18	6.7	66	16	18	6.7
Nepal	60	20	20	6.5	64	19	17	5.4
Pakistan	68	19	13	6.5	70	20	9	6.2
Philippines	79	7	14	5.8	82	5	13	5.6
Sri Lanka	73	9	18	6.1	75	7	18	5.7
Thailand	67	13	20	6.1	76	12	12	5.8
Colombia	72	3	25	5.4	74	4	23	5.9
Costa Rica	71	4	25	5.0	77	4	19	5.9
Dominican Rep	66	3	31	5.1	72	3	25	5.3
Mexico	77	7	15	5.8	76	4	20	5.4
Panama	65	5	31	4.7	70	4	26	5.1
Peru	70	6	24	5.5	75	6	19	5.4

Removing the ring

Number of divorces

	1963	1981
Australia	7.476	41.412
Canada	7.[illegible]	67.671
Denmark	6.[illegible]	14.700
England & Wales	31.045	144.763
France	30.288	85.000*
Holland	5.851	30.770
Sweden	8.491	21.200
USA	428.000	1.180.000
West Germany	50.833	109.520

*1979

Refusing the ring

Number of births outside marriage as a % of all births

	1960	1970-80
Australia	4.8	11.7
Canada	-	12.1*
Denmark	7.8	33.2
England & Wales	5.2*	10.9
France	6.1	11.4
Holland	1.4	3.4
Sweden	11.3	39.7
USA	5.3	17.1
West Germany	6.3	7.6

*UK figures *1973

Source: 1982 Demographic Yearbook

The chosen few

The World Fertility Survey asked women aged 45 – 49 and 15 – 19 how many children were in an 'ideal family'.

Women are beginning to transform their ideals into reality. In almost every country they are having fewer children than their mothers because they marry later, are better educated, have access to contraception and employment opportunities outside the home.
And smaller families mean better health for mothers and their babies. In the US and Sweden, when women began to limit childbearing to the ages of 20 – 34, there was a 29% drop in infant mortality.

	Ideal family size	
	Older women	Younger women
AFRICA	7.8	6.6
ASIA & PACIFIC	4.9	3.3
LATIN AMERICA & CARIBBEAN	5.5	3.3
MIDDLE EAST	5.9	4.2

10

Looking forward

"IN the year 2000 I would be 31. There is every possibility that I may not be still alive. But if I am, I will be an architect. I want to build buildings which will not only beautify the world but bring happiness. People who live in my buildings cannot help but smile and be happy.

I live in Bangladesh and I have spiritual relations with the soil, water and soul of every other person here.

Bangladesh wants many things from me. The responsibility to develop this country will be our responsibility.

Most of the people of our country are cultivators. They work hard, heart and soul. But the tools for cultivation are poor. In the year 2000 there will be better tools and with hard work there will be more food. The poor people will not die from famine and our country will be developed like America, Japan, Russia and China. Then we will all live happily.

The houses by then will not be made of mud. They will be of stone and will not fall down easily. Bridges will be made over the rivers and good roads will run from town to town. Everything will be changed except for our favourite rice and fish.

There will be machines. But the machines should not take the vitality out of you and take out the happiness from small things. There should be pitchforks for pitching hay, for example, but I would like a machine to wake me up and give me tea in the morning.

But they tell me that population growth threatens the nation.By 2000 A.D. the population will be nearly doubled they say and it will be impossible to live in Bangladesh. If all of us only have two children then it will be possible to live in this land. I will only have two children. I know that if I marry I will never be able to shine in my life, but even then I dream of having children.

When my own parents are old I will of course want them to stay with me. Then I will be able to make sure that they are happy and comfortable and it will be my chance to love them though I can never give back the love they have given me all their lives.

Finally I hope that in the Year 2000 A.D. there will be one nation, and that is human beings; that there is one race and that is the human race; and that there is one religion and that is humanity; and that there is one country and that is the earth; and lastly that the entire mankind may lead a harmonious life of peaceful existence and tolerance."

by Anawara Khan, from her school essay

Source: *New Internationalist Calendar*, April 1985
By Warwick Wilson, Macarthur Institute of Higher Education, Sydney

Student Exercises

1. Read the passage, "Looking Forward", and answer the following questions:
   (a) In what country does Anawara Khan live?
   (b) Make a list of things which suggest that this nation is at present a poor country.
   (c) What is the major problem that threatens the future of the nation?
   (d) How old is the author of this passage?
   (e) Why do you think Anawara Khan has decided to have only two children in the future?
   (f) What does the final paragraph tell you about the real wishes that Anawara has for the future?

2. (a) Using the data shown in each dwelling located on the two globes, construct a graph to show the variations in the number of children born to each woman.
   (b) Why do you think the statistics for Africa and Asia in your graph are much higher than those for Europe and North America?
   (c) In El Salvador, what is the percentage increase in the number of infant deaths (per 1000 births) between mothers who have four children and mothers who have five children.
   (d) If you were a child born to a 21 year old mother in Argentina, would you have more or less chance of surviving infancy that a child whose mother is 18?

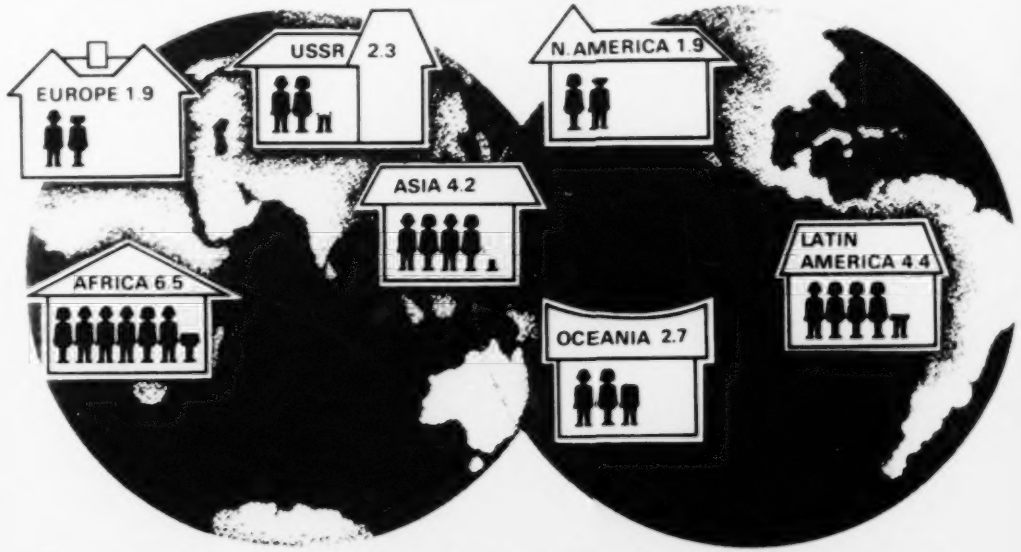
3. (a) Does the use of an "average" figure for the number of children born to each woman convey an accurate picture of the real situation?
   (b) Do you think that "surveys" in countries like El Salvador and Argentina can be accepted as "reliable" sources of data? Wht?
   (c) Why would the Javanese woman's baby have a "one in ten chance of dying in its first year"?
   (d) How would the Javanese baby's chances of survival compare with a baby in Australia?

4. (a) In "Looking Forward", Anawara claims that she will never be able to shine in life if she marries. Why would she feel this way?
   (b) Anawara's hopes for the year 2000AD are most enlightening. Do you see any link between these and her earlier statement about "spiritual relations with the soil, water and soul of every other person here"?
   (c) The graphs for El Salvador and Argentina are titled "Too Many" and "Too Young" respectively. Are these appropriate labels, or do they imply the value judgments of others?

Continued on page 87

COUNTING ON CHILDREN

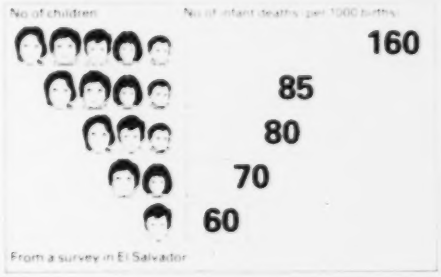
On average 3.9 children are born to each woman in the world – but there are wide regional variations



There are also wide variations within regions. In Asia the figure for China is 2.8 while in Pakistan it is 6.3

TOO MANY

The risks to the health of both mother and infant increase steeply after the third child



TOO YOUNG

Children born to women under 20 are approximately twice as likely to die in infancy as children born to women in their mid-20s

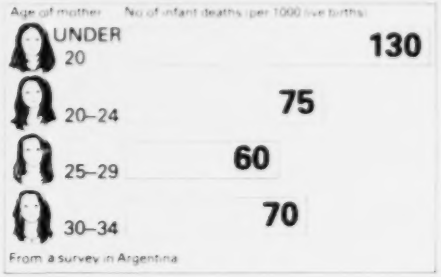


Photo: Laura and Hans Silvester

Bearing the future. This Javanese woman's baby will have a one in ten chance of dying in its first year and a 26 per cent chance of malnutrition in its second. And its life expectancy at birth will be only 54 compared with a rich world average of 74 years.

11

Reaching for growth

'TOUCH this hand.'

This hand that feels the womb and locates the head and straightens out the lopsided baby. This hand that transmits calm and strength to the mother, while her body unfolds, and then offers her cinnamon or lavender tea. This hand that gives the dab of honey to the newborn child so this will be its first taste of the world. This hand that buries the placenta, which is like a root freshly pulled out, which is covered with earth and returns to the earth.

This hand that gives birth. What could be a more wonderful occupation?

'The first child I delivered is old already. I've delivered thousands. And twins, three times. Never for money. If someone wanted to pay me with a chicken, I'd accept with pleasure, and that chicken would be like a whole cow for me. I've delivered quite a lot in the hills, alone, in the middle of the night. Burned the cord with a nail. In the old days, that's all there was. I was taught by one of my grandmothers, who told me, "Look, granddaughter, I'm going to die. Learn so you'll help yourself and others." I come from the end of the earth. I won't be able to help out much longer, because of my age. But I'll teach others. It's an honour to. Until God takes my life. Until then.

'I began with myself. I would take care of myself. I gave birth to seventeen babies that way. And then I had to deliver other babies, because in the Bramadero valley there's no one around to tie the cord. My knowledge was natural, but now I give shots and have iodine and mercurochrome. In the old days no-one paid any attention to you. And babies were born on the floor, any old way, and many died. We're changing. That's what we're doing. Changing. But we've been reduced to rubble and we're poor and now, war again. And I tell you this: we've put our hands on the plough and we're not going back. As Christ said. And don't ask me anything else because I'm very nervous. They've just killed my son. That's how nervous I am.'

This is a day of celebration. The midwives have come to Estel to celebrate something worthwhile. Last year twenty-five infants died, stricken down by tetanus. This year, not one. Midwives don't sever umbilical cords with machetes anymore, or burn them with hot grease, or tie them without sterilising them. And vaccinations have also been crucial: vaccinations given to pregnant women transmit the immunity to the child being formed, as if it were an organ in the mother's body.

This year, not one.

'We have defeated death,' says one government representative at the meeting. 'And a revolution is just that: defeating death.'

Photo: Peter Stalker

from Eduardo Galeano, writing about Nicaragua in 'The State of the World's Children 1984' UNICEF

Source: *New Internationalist Calendar*, July1986
By Margaret Robertson Launceston College, Launceston

Student Exercises

1. Read the passage, "Reaching for Growth", and answer the following questions:
   (a) Who is person talking in the passage?
   (b) What is her job?
   (c) How has her job changed and why?
   (d) What do you think is meant by the title of the passage "Reaching for Growth"?

2. Use information from the passage and the graphs to answer the following question:
   (a) How do officials measure the number of death of infants?
   (b) What do you suppose are the main reasons why so many babies die young in less developed countries?
   (c) What are the four simple techniques which help to provide primary health care?

3. (a) Contact your local Community Welfare Centre and find out what you can about the care and medical treatment available for pregnant women in your community? You could do this as a group or by inviting a guest speaker.
   (b) Are the four simple techniques of primary health care available to all women and babies in your community? What other assistance is provided?

4. Try to imagine a child in a poor country growing up and compare the basic health provisions with those of a child growing up in a rich country.
   (a) What will be the big differences in the energy available to each child?
   (b) How do you think these differences will affect what each child may be able to do when he or she grows up?

5. Either in groups or as a personal project imagine the two children you compared in Question 4 are real people (i.e. one from a rich country and one from a poor country). Select an age span (eg 5-10 years) and create characters for each person:
   - Consider the food each may eat in a day
   - Describe each home and family members
   - Outline a day at school and include recreation and leisure activities
   - Look into the future and describe the possible life of your people when they are 25 years of age.

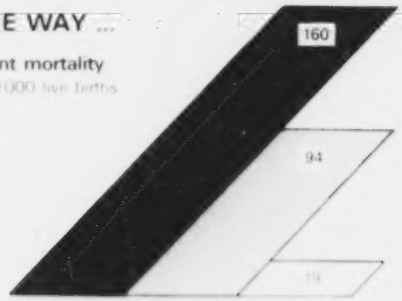
6. Write a play about what they would say if your two characters met when they were 25 years of age.

Children's health

Which way will we choose?

ONE WAY ...

Infant mortality
(per 1000 live births)

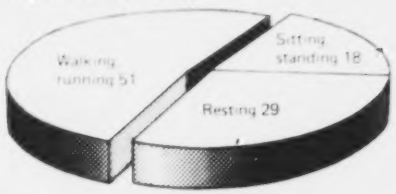


Total energy expenditure

A European child has much more energy to spend on working and playing than a child from a malnourished community in Africa at a time when this is important for the development of physical and mental skills.

African child 79 units*

European child 98 units*



*Unit = Kcal/kg bodyweight/day

Photo Claude Sauvageot

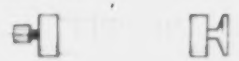
... OR THE OTHER

Just four simple methods would save the lives of half the 40,000 children who die every day – if they were fully implemented.

Breastfeeding
is safer and more nutritious than powdered milk. It reduces the risk of diarrhoea and chest infection by half.

Oral rehydration
is a simple mixture of salt, sugar and water. It is the most effective weapon yet in the battle against diarrhoea which kills five million children a year.

Immunization
against common diseases like tetanus, measles and whooping cough. These carry off 4½ million children a year.



Growth charts
to check the baby's weight in case of malnutrition, which is often visible. An average child in a poor community faces six weight-losing illnesses a year.

Implementation need not be a great problem. For governments that cannot address the root causes of infant mortality and child malnutrition – that is poverty and inequality – these four simple techniques at least offer an acceptable, apolitical start.

12

Earning their keep

JESUS ANTONIO PINELLA is ten years old. He has the skinny legs, grazed knees, tousled hair and lop-sided smile of many ten year-olds in the world. But there is something more adult in his eyes: because Jesus Antonio Pinella carries a heavy responsibility as his family's main wage-earner.

'I went to work on the street because my mother is very poor,' he explains. 'There are eight children so I had to try to get food.' In Bogota, Colombia – where, it is said, people will even steal the spectacles from your nose – crime has created its own particular set of job opportunities. Every supermarket has its guard toting a pump-action shotgun. Every school bus has its armed body-guard to protect rich children from kidnappers. And every window of every smart up-town house is protected with a cage of black iron bars.

Jesus Antonio earns his living standing guard over parked cars in the city. 'I get about 50 or 60 pesos a day. I like to earn money. But it's difficult living on the street. There is just now here to wash. And I don't like asking for money from strange people. On the street I sleep with my friends. I often get cold at night and sometimes sick too. When I grow up I want to get a proper job as a driver to help my mother.'

Photo: Peter Barker

Jesus talks of 'when I grow up'. But he, and thousands like him, are adults already, able to look after themselves with determination and resourcefulness under conditions in which most children – and many adults – could not survive. These street-wise children are just a tiny fraction of children whose formative years are spent working for a living rather than sitting in a classroom. The United Nations Fund for Population Activities estimates that less than half the children of primary school age – 350 million of them – will be at school by 1985. Sometimes this is because the nearest school is simply too far away, or because their parents cannot afford school fees or tidy clothes. But often they stay away because their family needs them to work.

The International Labour Office is against child labour of any kind, arguing that a young body is too unformed and vulnerable to carry out any kind of manual labour without suffering damage. But their report 'Children at Work' also warns against sentimentalising the problem and taking it out of its economic context.

Not all working children have their soft bones injured by hours of heavy work on the land. Not all are exploited and beaten by factory foremen on the city outskirts. Many make their contribution by doing vital but time-consuming jobs – like herding goats, looking after younger children, or just sitting, hour after dusty hour, selling cigarettes, peanuts or fruit by the side of the road.

And every hour they work not only frees their parents for heavier tasks, it may make all the difference to the chances of their younger brothers and sisters. 'I had to leave school because there was no-one else to help my mother,' says 14 year-old Aurelio Vidarte from Peru. 'It's very tiring work planting corn – the ground is so hard. But it means my brothers and sisters will be able to stay at school much longer than me'.

Source: *New Internationalist Calendar*, August 1984
By Harwood Lockton, Avondale College, Cooranbong

Student Exercises

1. Read the passage, "Earning their Keep", and answer the following questions:
   (a) How many children are there in Jesus Antonio's family?
   (b) Which member of his family earns most of the family's income? How old is this person?
   (c) What job does he do?
   (d) Why are many children in countries such as Colombia and Peru engaged in full-time work?
   (e) Give three reasons why children in poorer countries often do not attend school.
   (f) List the types of jobs these children do.

2. Compare Jesus Antonio's life with your own, for example:
   (a) How many children are there in your family?
   (b) Who is the main wage-earner in your family? Are they an adult or a child (under 15 years)?
   (c) What is the legal age in Australia at which children can start work?
   (d) Do you have a part-time job? If so, what type of work do you do?
   (e) What do you do with your wages - support your family or spend/save it for yourself?
   (f) What types of paid part-time jobs do children in Australia do? (You could survey your class.)

3. Make a list of arguments for and against child labour in poor countries.

4. Imagine you are Jesus Antonio or Aurelio Vidarte. How do you feel about having to work to support your brothers and sisters? Write about these feelings in a letter to a friend.

5. Look at the chart on "School Enrolment".
   (a) Draw two pie-graphs to show the proportion of the population under 15 years in the developing world and in the industrialised world.
   (b) Shade the approximate proportions of children attending school on each diagram.
   (c) Give a suitable title to these diagrams.

6. Look at the chart on "Working Age".
   (a) What is the estimated number of children in the world who are working?
   (b) Why is this figure inaccurate?
   (c) Describe the main differences in the age composition of the workforce in the industrialised countries and in the developing countries.

Continued on page 88

CHILDREN AT WORK

SCHOOL ENROLMENT

In the developing world 39 per cent of the population is under 15. But less than half the children aged 7-12 attend school.

In the industrialised world 23 per cent of the population is under 15. Almost all attend school.

	% of children in primary school	% of children in secondary school
Africa	68	15 7
Middle East	86 9	49 6
Asia	81 3	33 5
China	100 0	100 0
South America	97 1	44 7
Central America	92 4	41 9
North America	100 0	93 0
Europe	97 4	77 9
Oceania	100 0	83 5
USSR	100 0	100 0

Source: World Development Report 1982

WORKING AGE

The International Labour Office estimates that at least 52 million children are economically active. But because so many work unofficially or illegally this is likely to be an extreme underestimate. A more accurate picture is given by the United Nations Fund for Population Activities' estimates shown below.

Composition of the workforce by age (%)

CHILDREN AROUND THE WORLD

	Total no. of children under 15 in 1980 (millions)	% of population	Total no. of children under 15 in 2000 (millions)	Infant mortality rate per 1,000	Life expectancy at birth	Total fertility rate	% aged 10 - 14 ★ in labour force
AFRICA	**211**	**45**	**351**	**140**	**49**	**6 4**	**18**
Northern Africa	47	43	71	120	54	6 2	10
Western Africa	65	46	118	159	46	6 8	18
Eastern Africa	61	46	108	132	47	6 6	26
Middle Africa	23	43	34	167	45	6 0	18
Southern Africa	14	42	20	101	59	5 2	4
ASIA	**944**	**38**	**1,113**	**104**	**60**	**3 9**	**13**
Southwest Asia	41	42	61	117	56	5 8	13
Mid-south Asia	392	42	513	137	51	5 5	18
Southeast Asia	149	42	185	97	53	4 7	15
East Asia	363	31	353	51	68	2 3	8
NORTH AMERICA	**56**	**23**	**63**	**13**	**73**	**1 8**	**2**
LATIN AMERICA	**149**	**41**	**211**	**85**	**64**	**4 5**	**7**
Middle America	41	45	57	71	64	5 3	6
Caribbean	11	38	14	73	65	3 8	6
Trop. S America	85	42	127	98	62	4 6	8
Temp. S America	12	29	13	44	68	2 9	4
EUROPE	**108**	**22**	**107**	**18**	**72**		
Northern Europe	17	21	17	12	72	1 8	0
Western Europe	31	20	31	12	72	1 6	2
Eastern Europe	26	23	26	23	71	2 2	1
Southern Europe	33	24	33	21	71	2 2	4
USSR	**65**	**24**	**74**	**36**	**69**	**2 3**	**0**
OCEANIA	**7**	**29**	**8**	**43**	**69**	**2 7**	**7**
MORE DEVELOPED COUNTRIES	**260**	**23**	**274**	**21**	**72**	**2 0**	**1**
LESS DEVELOPED COUNTRIES	**1,279**	**39**	**1,652**	**110**	**58**	**4 4**	**14**
WORLD	**1,539**	**35**	**1,926**	**98**	**62**	**3 7**	**11**

★ *These figures should be taken as a rough guide only. Children working without wages for their own families are not included.*

Source: World's Children Data Sheet. Population Reference Bureau Inc.

On the land

"I work on another family's farm nine hours a day for two rupees. I've never been to school. But I can do some things better than children who go to school like weeding, watering, spreading fertiliser, cleaning, washing the clothes, looking after the children, and cooking. I can count how many people in my family: two brothers, five sisters makes seven and me makes eight and my parents makes ten altogether. So I don't really need to go to school."

Indira, aged 10, India

Photo: Lesley Adamson

On the streets

"I sell cigarettes on the streets of Bogota. I buy them on the Black Market at San Andresito. I start at eight in the morning and finish at six at night and usually sell about 20 packets. I make five pesos on each packet and give it all to my mother to buy food and clothes. My father tries to get work as a handyman. But I earn more than he does. If I had stayed at school I could have been a lawyer. Nobody criticises a lawyer the way they do if you sell cigarettes."

Luis, aged 14, Colombia

Photo: Peter Stalker

13

The greying of nations

A SILENT population explosion is building up for the beginning of the 21st century. The baby boom is finished and growth of the over-60s is now outstripping all other age groups. By 2025 there will be more than a billion people aged over 60 — and for the first time in history they will outnumber the young.

'The elderly of the future are already among us,' warned the United Nations World Assembly on Ageing in 1982, 'and unless we do something about the problems of ageing today they will reappear with a vengeance tomorrow.'

The UN World Assembly saw the first ever world-wide projections of ageing taken beyond the year 2000. 'Unlike many computer predictions,' says the UN, 'these are based on known facts: the over 60s of 2025 are alive today — aged 19 and over — in huge numbers.'

The sharpest effects of population ageing will be felt in developing countries. Today their populations are strikingly young — with up to 50 per cent aged under 25. But by 2025, when nearly three quarters of the over 60s will live in the Third World, countries like Bangladesh, Brazil, Mexico and Nigeria will see their over 60s increase by up to 15 times. And so the centuries-old population pyramid will begin to turn upside down: old will outnumber the very young in all developing countries. In some, like China, one generation will witness a complete transformation to an age structure like that in Western Europe in the 1950s.

The reasons for population ageing are simple: two decades of development effort have successfully lowered fertility and improved health and nutrition. And fewer babies living longer lives mean more old people. But until now the effects were unforseen, and the centre of gravity of world population has been changing unnoticed. Most important is the shift in what demographers call the 'dependency ratio': people are growing old faster than children are being born to support them in old age. In 1950 there were just 19 people over 60 for every 100 adults aged between 15 and 59. By 2025 there will be more than twice that number.

'The message for developing countries is clear', says the UN. 'They must learn from the mistakes, not the example, of rich countries'. Third World governments cannot expect to divert scarce resources into welfare schemes for the elderly for generations to come. With 200,000 people reaching the age of 60 every day by 2025 charity alone is not a solution. 'We must search for alternatives,' urges the UN, 'that stress the productive involvement of the aged, not just their protection and care.'

Photo: Marketa Luskacova

Source: *New Internationalist Calendar*, May 1984
By Mike Dove, Melbourne Institute of Education

Student Exercises

1. Read the passage, "The Greying of Nations", and answer the following questions:
   (a) How many is one billion? Write one billion as a number. How does this compare with the current population of the world?
   (b) What will happen for the first time in 2025?
   (c) How many people will reach the age of 60 every day in the year 2025? At this rate, how many days would it take to add the equivalent of today's total population of Australia?
   (d) Why is the world's population ageing?
   (e) Describe how the dependency ratio will change by 2025 compared with 1950?
   (f) What does the United Nations advise as the best way to plan for large numbers of elderly people?

2. Examine the panel called "The Age of Ageing".
   (a) Why do you think this photograph was chosen to go with the caption?
   (b) For the period 1950 to 2025 draw two graphs to compare the growth of world population as a whole with that of the 'over 60s'.

3. Examine the panel called 'Fewer Babies'.
   (a) According to the estimate, what will be the approximate birth rate in the year 2025?
   (b) What message is the artist trying to convey in the sketch? Do you think this message is likely to represent an accurate view of the future?

4. Examine the two central panels.
   (a) What is meant by 'life expectancy'? How is the world average for life expectancy likely to change by the year 2025?
   (b) The graph shows a comparison of life expectancy for 'industrialised' countries and 'developing' countries. Using some figures from the graph, write two or three sentences to compare the differences between industrialised and developing countries over the period 1950 to 2025.
   (c) 'Industrialised' and 'developing' are useful and commonly used terms to describe the richer and poorer countries, but are they accurate? Develop an argument which challenges the use of these terms.
   (d) In China, how many workers supported one non-worker in 1975? How many workers will support one non-worker by the year 2025? How might this affect China's ability to support its elderly population?

Continued on page 88

OLD PEOPLE

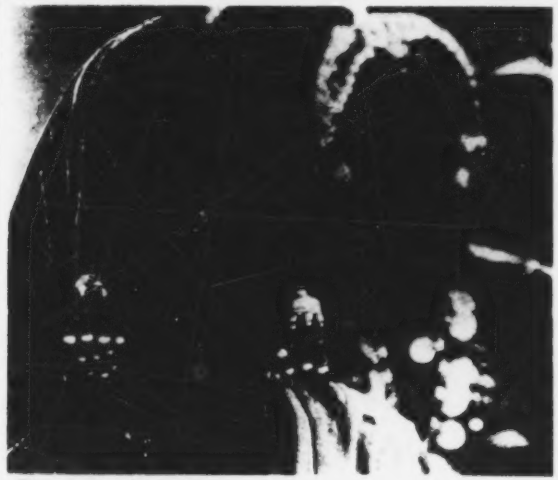
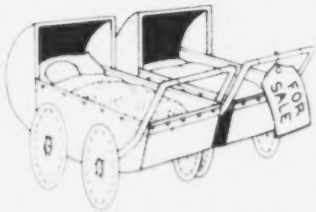


Photo: John Isaac

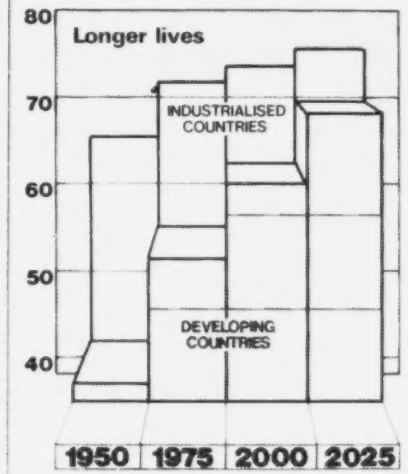
The age of ageing

For the first time in history we are seeing the worldwide emergence of a new generation – the over 60s. Total world population is expected to treble between 1950 and 2025. But the UN predicts a fivefold increase in the population of the over 60s.



Fewer babies

World birth rate is slowing down. In 1950 there were over 36 babies born for every 1,000 people. By 2025 the UN estimates there will be only half that number.



Improvements in health and nutrition mean that people are living longer. Average life expectancy at birth was only 47 in 1960. By 2025 life expectancy is forecast to be 70 years.

By 2025 the ratio of over 60s to adults aged 15-59 in East Asia is expected to double. In China seven workers supported one person in 1975. In 2025 they will be supporting two.

Photo: Richard and Sally Greenhill

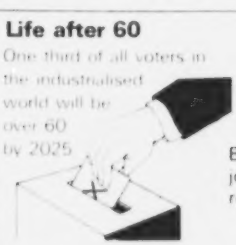
The population pyramid

People are growing old faster than children are being born to support them in their old age. In 1950 there were 19 people over 60 and 45 children under the age of 15 for every 100 adults aged 15-59. By 2025 there are expected to be 40 over 60s and only 35 children for every 100 active adults. The population pyramid is slowly turning upside down.

		1950	1975	2000	2025
WORLD figures in millions	over 60	214	346	590	1122
	percentage	8.5	8.5	9.6	13.7
AFRICA	over 60	12	20	33	100
	percentage	5.5	4.9	5.0	6.6
LATIN AMERICA	over 60	16	29	61	161
	percentage	5.4	6.3	7.3	10.8
NORTH AMERICA	over 60	20	34	45	76
	percentage	12.1	14.6	15.0	22.3
EAST ASIA	over 60	52	90	193	335
	percentage	7.5	8.2	11.5	20.0
SOUTH ASIA	over 60	54	82	133	308
	percentage	7.8	5.0	6.4	10.9
EUROPE	over 60	51	82	110	174
	percentage	12.9	17.4	19.9	24.1
OCEANIA	over 60	1	2	4	9
	percentage	11.3	11.1	12.5	17.8
USSR	over 60	16	34	54	111
	percentage	9.0	13.4	17.5	29.1

Life after 60

One third of all voters in the industrialised world will be over 60 by 2025.



But more than five in six will be without a job by 65 – often because of compulsory retirement.

In the industrialised world three-quarters of the over 60s are healthy enough to lead active, independent lives.

123 countries now offer a pension to retired workers. But most developing countries only provide for those in formal employment. Up to 80 per cent get no regular wage, are not entitled to a pension and cannot afford to retire.

14

Women hold up half the sky

'MY day begins at four in the morning, especially when my companero is on the first shift. I prepare his breakfast. Then I have to prepare the saltena pies (a local speciality, the filling includes meat, potatoes, peppers and spices) because I make about one hundred saltenas every day and I sell them in the street. I do this in order to make up for what my husband's wage doesn't cover in terms of necessities. Then the children that go to school in the morning have to get ready, while I wash the clothes I left soaking overnight.

'At eight I go out to sell. The children that go to school in the afternoon help me. We have to go to the company store and bring home the shopping and in the store there are immensely long lines and you have to wait there until eleven in order to stock up. So all the time I'm selling saltenas, I line up to buy my supplies at the store. I run up to the counter to get the things and the children take over selling the saltenas. Then the children line up and I sell. That's how we do it.

'At noon, lunch has to be ready because the rest of the children have to go to school. In the afternoon I have to wash clothes. There are no laundries. We use troughs and have to go and get the water from the pump. I've also got to correct the kids' homework and prepare everything I'll need to make the next day's saltenas.

'The rest of the things have to get done at night. When my husband works in the morning, he goes to sleep at ten at night and so do the children. When he works in the afternoon, then he's out most of the night, right? And when he works the night shift, he only comes back the next day. So I have to adapt myself to those schedules.

'So that's how we live. That's what our day is like. I generally go to bed at midnight. I sleep four or five hours. We're used to that.

'But in spite of everything we do, people still think that women don't work, because they don't contribute economically to the home, that only the husband works because he gets a wage. We've often come across that difficulty.

'One day I got the idea of making a chart. We put as an example the price of washing clothes per dozen pieces and we figured out how many dozen of items we washed a month. Then the cook's wage, the babysitter's, the servant's. We figured out everything that we miners' wives do every day. Adding it all up, the wage needed to pay us for what we do in the home was much higher than what the men earned in the mine. So that way we made our companeros understand that we really work, even more than they do.'

by Domitila Barrios de Chungara
From 'Let Me Speak' Monthly Review Press

Source: *New Internationalist Calendar*, April 1985
By Christine Corrigan, St. Margaret's School, Berwick, Melbourne

Student Exercises

1. Study the passage, "Women Hold Up Half the Sky", and answer the following questions:
   (a) What is the full name of the woman who is describing her day's work?
   (b) How many children do you think this woman might have? Why?
   (c) List all of the work which Domitila completes during one day.
   (d) What do you think the word "companeros" means, and what evidence from the passage supports your explanation of the word.
   (e) How does the "companero's" day working compare with Domitilia's?
   (f) In one sentence, write down the main message of the passage.

2. Domitilia and some of the other wives of miners drew up a chart of the work that they completed.
   (a) What might have been the purpose of this chart?
   (b) How do you think the "companeros" might have reacted to the chart?
   (c) Working in groups, create a role play involving the following situations:
   - women drawing up a chart of daily tasks and potential wage
   - presentation of chart to their husbands - their reaction
   - discussion amongst the women following the presentation
   Present this role play to the class.

3. What might be the Australian equivalent of a "saltena"? How long do you think it would take you to make 100 saltenas?

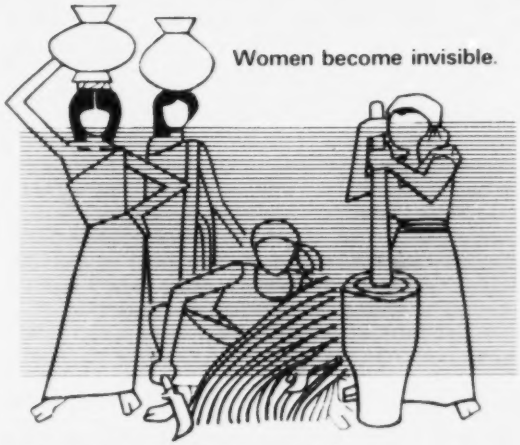
4. Write a passage from the point of view of Domitilias "companero", describing his daily routine. What title have you given it? Why?

5. Do you think that the title for the original passage is appropriate? Why? Perhaps you could suggest another, alternative title?

6. Study the illustrationsir. the large diagram called "Female Labour".
   (a) What work is carried out by women in developing countries?
   (b) What work is carried out by western women?
   (c) Suggest reasons for these great differences.
   (d) Although the diagram are very simple, how does the artist give the reader insight into the cultural variations between the two?
   (e) Describe how the artist has portrayed the impression of the women's work being invisible.

Continued on page 89

FEMALE LABOUR



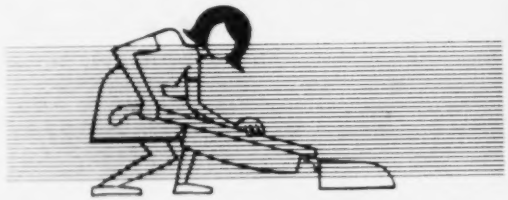
Women become invisible.

Women's work is not counted in official statistics.

The International Labour Organisation Yearbook shows women doing the following amounts of agricultural work:

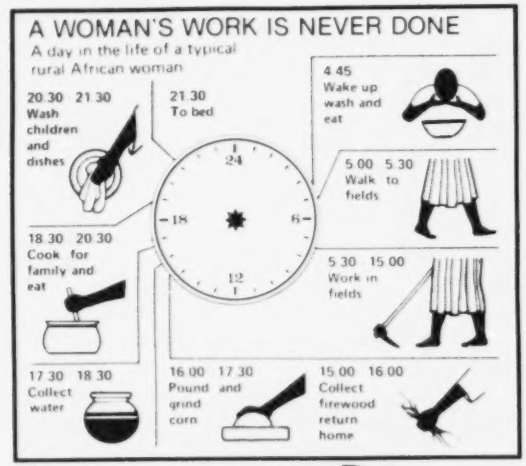
ALGERIA 1%
VENEZUELA 3.7%
BANGLADESH 3.9%

Yet women do at least 60% of agricultural labour in developing countries and produce 44% of all food.



Western women's work can be invisible too. The average Western housewife spends 3,000–4,000 (unsalaried) hours each year on housework. A 35-hour a week 'paid' job means 1,750 hours in the whole year.

Photo: Food & Agriculture Organization


A WOMAN'S WORK IS NEVER DONE
A day in the life of a typical rural African woman
20.30 21.30 Wash children and dishes
21.30 To bed
4.45 Wake up wash and eat
5.00 5.30 Walk to fields
18.30 20.30 Cook for family and eat
5.30 15.00 Work in fields
17.30 18.30 Collect water
16.00 17.30 Pound and grind corn
15.00 16.00 Collect firewood return home
24
6
12
18

15

Mrs Jana's day

IT is four in the morning on the rubber estate. Mrs Jana stirs. Lying awake in the dark she listens to the deep breathing of her husband, Rajen, occasionally erupting into a snort, and the shallow snuffling of her two children. She strokes the baby's head and kisses his shoulder.

Moving quietly she goes from the sleeping area into the kitchen, lights the kerosene lamp, puts a match to the few sticks piled up on the concrete stove, and prepares the morning meal. Rice for her husband, seven-year-old daughter Chitra and herself; Dumex baby milk for Krishnan. It would be better to breastfeed him, she knows, but she has to work.

Both children are awake now. Only father sleeps on, oblivious to these early beginnings of the day. He was at the toddy shop last night drinking coconut brew and must not be disturbed until all is ready. He does not work on the rubber estate any more. The pay is too low. Instead he does casual labour on a building site, earning up to $8 a day – when he goes. Mrs Jana suspects he will not be going today. She, however, has to work on the estate in order to earn the right to a house in the 'labour lines' – the long row of two-roomed shacks in which entire families live.

It's time for Mrs Jana to leave for work. She registers at the estate office by 5.30 am. A truck then takes her with 50 other tappers and weeders to the plantation. Once on her patch of rubber trees, she pulls up her socks – essential protection against snakes and insects – tightens her sarong, and placing her ladder against the smooth tree trunk, climbs up and carefully cuts the bark. The milky latex oozes along the wound and into the little collecting cup. On a good day she will tap 400 – 500 trees and get paid $1.80 to $2.60 for her efforts.

By ten o'clock the sun is burning ferociously. The trees give shade but there is no escaping the clammy air that clings to the skin as she works solidly, for several hours.

It's six o'clock before she gets home. No sign of her husband. Chitra says he went to get some baby food from the estate shop. Mrs Jana knows what that means. The toddy shop is next door to the grocer's.

While Chitra goes to the standpipe to fetch water, her mother prepares the modest evening meal – rice and a few vegetables. By now Rajen has returned and is fixing a light from a car battery. He doesn't seem to be too drunk – and he's remembered the baby milk. After the meal Mrs Jana cleans the dishes, prepares the fire for the morning, then washes the children and puts them to bed.

Her husband is already stretched out. She stands for a minute in the doorway watching the lights from the other 'lines' going out. Wearily, she lies down, listening in the dark to her husband's deep breathing, the children's shallow snuffling, as they sleep.

Source: *New Internationalist Calendar*, February 1988

By Suzanne Hollands and Jacinta Kerley, Brisbane College of Advanced Education

Student Exercises

1. Study the passage, "Mrs Jana's Day", and answer the following questions:
   (a) What time in the morning does Mrs Jana have to wake up? Why?
   (b) What paid job does Mrs Jana do? What other jobs must she also do in a day?
   (c) Why doesn't Mrs Jana's husband work on the rubber estate any more?
   (d) What would happen if Mrs Jana did not go to work on the rubber estate?
   (e) What time does Mrs Jana get home in the evening? What must she do as soon as she arrives home?
   (f) What seems to be the staple diet of Mrs Jana's family?
   (g) What do you think a "toddy shop" is? Support your explanation using evidence from the passage.

2. Does Mrs Jana live in a developed country or less developed country? Use evidence from the passage to support your answer.

3. Compare the wage Mrs Jana receives with that of her husband. Do you think it is fair that she receives so much less? Why or why not?

4. How would you describe Mrs Jana's husband? Use evidence from the passage to support your description.

5. If you were Mrs Jana's husband what might you do to make your wife's life easier? Compile a prioritised list of things you might do, starting with what you believe to be most important.

6. Imagine that you are Mrs Jana. Write a letter to your sister in Australia describing the amount of work you do, your husband, and your feelings about your life. Base your letter on information from the passage.

7. Write a new title for the passage which summarizes its overall message.

8. Study the box called "Division of Labour".
   (a) In which area of the work force would you find most women employed in developing countries?
   (b) How does this compare with Western countries?
   (c) Explain the trends you notice in your comparison.
   (d) Which type of country employs the most women in the industry (or manufacturing) sector? Why?

Continued on page 89

WORKING MOTHERS

More and more women now face the 'double day', combining childcare and domestic work with earning a living outside the family. Just as society undervalues the work they do in the home, so their skills are undervalued at the workplace – where they traditionally take the lower paid occupations.

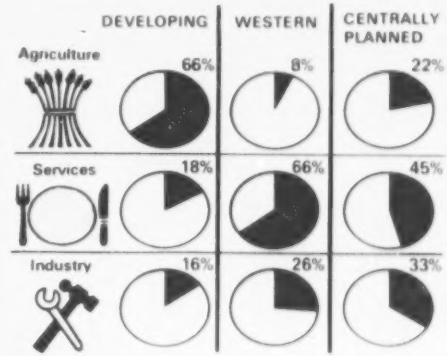
Sisterhood is global . . .

The chains that bind: in 1982 a Western woman in manufacturing only earned 73 cents for every dollar earned by a man doing the same work.

Photo: Janine Wiedel

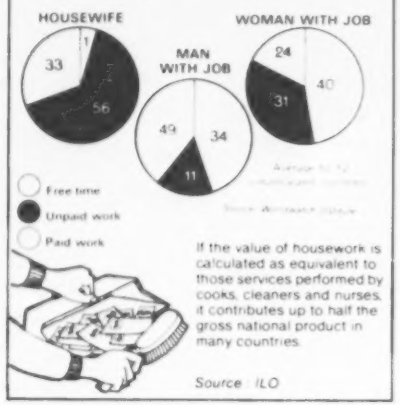
Division of labour

The diagram below shows the percentage of the female workforce in different types of employment.



The housewife

Domestic work is 'woman's work' whether she is in paid employment or not.



If the value of housework is calculated as equivalent to those services performed by cooks, cleaners and nurses, it contributes up to half the gross national product in many countries.

Source: ILO

Bringing back the bacon

Percentage of total numbers of each sex* in 1980 who are part of the waged labour force (selected countries).

	Male	Female
Australia	46	26
Bangladesh	15	0
Canada	50	36
Hong Kong	51	33
Indonesia	20	10
Iran	24	3
Italy	38	17
Japan	46	23
Mali	3	0
Netherlands	44	18
Norway	46	35
Thailand	13	8
UK	48	33
USA	47	34
Venezuela	28	13

*The total number would also include those too old or young to work, those unemployed or self-employed, those in unpaid domestic work and those in subsistence farming.

Sisterhood is global . . .

Torn apart by competing responsibilities: this working mother in an electronics factory in the Dominican Republic will also bear the brunt of domestic concern, bearing on average five children in her lifetime.

Photo: Philip Wolmuth

16

Africa, my Africa

AFRICA my Africa. If I had breath enough I would curse: once for the day that you bore me; twice for making me a woman. I would spit at the sun for shining on me, merciless, blazing, every day of my life; withering my spirit and turning my skin rough and dark, black as the bark of the acacia tree.

Africa is dying because of me. I have been carrying this continent for centuries. But I can't bear the weight any longer. And as I sink to my knees so Africa sinks down too.

Yes, it's hard for my sisters in India; in Indonesia and Indo-China; in Barbados, Bolivia and Brazil; arms, back and thighs tightening and straining, doing half of all work in the fields. They are bowed and bent by their workload.

Photo: Werner Gartung

But mine has brought me to my knees. They do half of all field work. But I do half as much again; and half of all work with our animals; and all of the threshing and winnowing. Then home to sweep courtyards, wash clothing, fetch water, cook supper. Yes, it is hard for them. And I'm sorry. But it's hardest of all for me.

You white-faced men had your guns and your greed, but the worst thing you did to Africa was to divide us: brother from sister and woman from man. You came from countries where a man works for money and a woman is expected to maintain his household, where men make laws and own land and hold power. You did not respect our tradition of sharing – in work, land and marriage; in what we grew and what we inherited. You wanted to remake us all in your image.

My man you have stripped of his sense of belonging. You stopped him from doing the things that a man should. And how can I blame him for refusing to help me? His scorn for my work makes him feel like he's human; his pride is a jewel in the deep of humiliation.

Me? I'm just woman. Invisible woman. Doing the work of both woman and man. No, I daren't stop working (who'd feed the children?); I can't use a tractor (who'd lend to a woman, without land, without birthright?); I've no time for schooling (I'm needed for weeding); I missed the last meeting (I was out chopping firewood); never been to the clinic (too late, now I'm pregnant); and I won't, won't abandon that thing I was born for: to make sure my children have food in their bellies.

Oh, if I had my way I'd rule over this continent. No one could turn me away from my duties. How could I forget what I've learnt all my childhood: a woman tends babies, pounds sorghum, draws water; a woman makes sure we have food in our bellies; a woman can never lose sight of her duties. If I only had half of the power that my man has. If he only did half of the work that is left to me.

Then, only then, can we stop Africa dying. Together we can stop Africa dying.

by Debbie Taylor

Source: *New Internationalist Calendar*, September 1987
By Nan Gallagher, Formerly, Kew High School, Melbourne

Student Exercises

1. It would be very useful if the passage, "Africa, my Africa", could be read aloud by a good dramatic reader. After the reading, answer the following questions:
   (a) Within the passage it is stated that "Africa is dying". In recent years what evidence have you noticed which supports with statement and what countries do you associate with this evidence?
   (b) Do you consider that this passage refers to a particular African woman, or is it intended to symbolise women of the continent of Africa as a whole? Why?
   (c) Could you write a similar piece on "Australia, my Australia"? Would you use a man or woman as the symbolic person?

2. These questions provide the geographical orientation of the materials.
   (a) Using an atlas map of Africa, list some examples of:
      - North African countries
      - Middle Eastern countries
      - Sub-Saharan Africa countries
   (b) Looking at the climatic evidence in the first paragraph, what African country might be a particularly apt example of these conditions? Why?
   (c) In what continent are Brazil and Bolivia? They are also part of "Latin America". What are examples of other countries in this group, and why is this term used?
   (d) In which continent are India, Indonesia and Indo-China located? (note: "Indo China" is Laos, Cambodia and Vietnam - this term is left over from French colonial days)

3. These questions provide the historical orientation of the materials.
   (a) Our symbolic woman alludes to "you white-faced men" referring to European countries, including Britain, France, Portugal, Holland and Spain which colonized Africa. List examples of present day African countries matched with the former ruler. e.g. Mozanbique - Portugal.
   (b) Explain the tradition of sharing which existed in the communities which were seized by the colonizers.
   (c) What was one of the main roles of men before the colonizers enforced peace between tribes? How does this explain women being traditionally responsible for growing food?
   (d) How did the rule of colonialism strip a man of his sense of belonging? Why do men still scorn farm and domestic work? (Select a quote from the passage which highlights this point.)

Continued on page 90

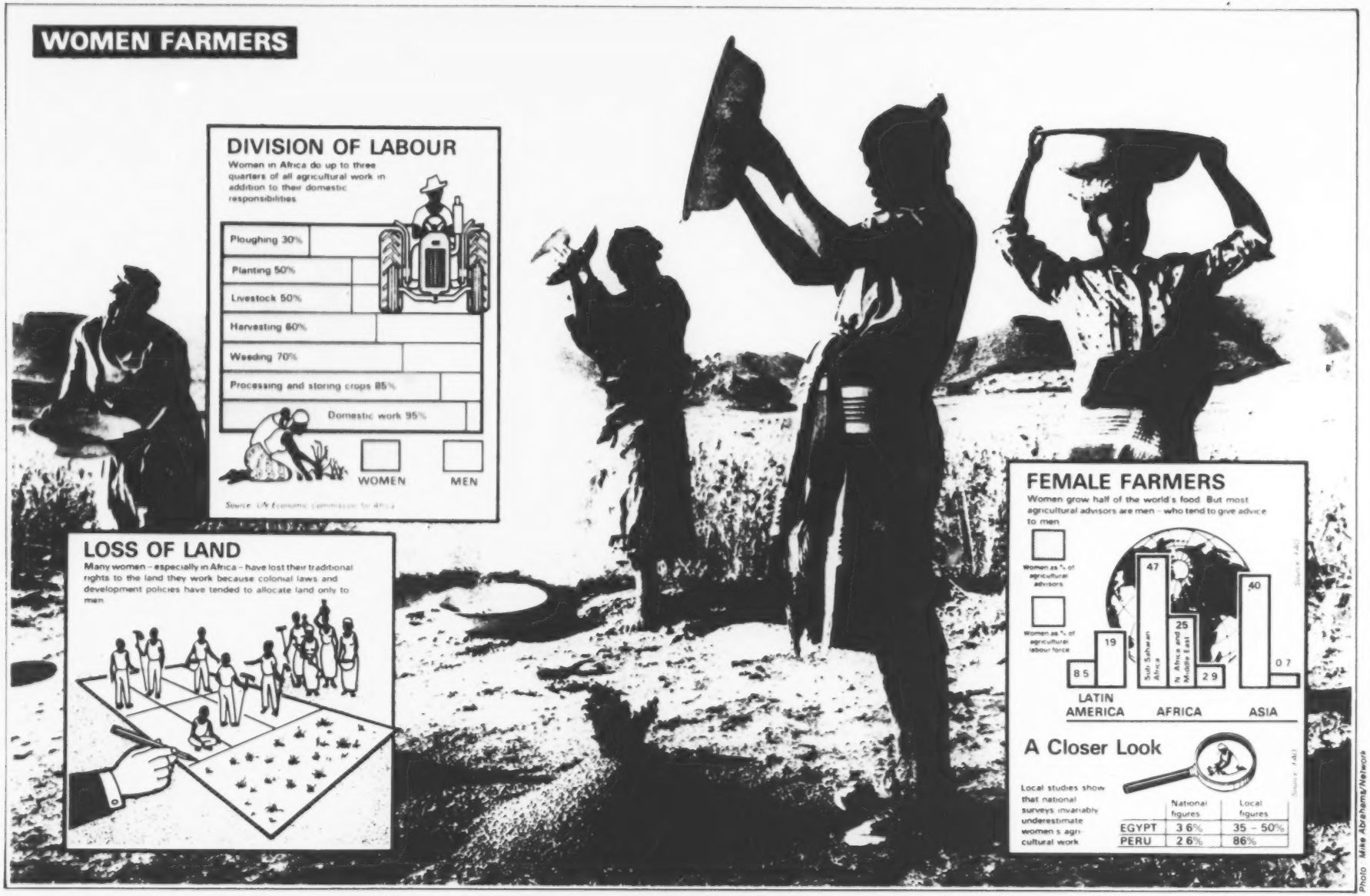

WOMEN FARMERS
DIVISION OF LABOUR
Women in Africa do up to three quarters of all agricultural work in addition to their domestic responsibilities
Ploughing 30%
Planting 50%
Livestock 50%
Harvesting 60%
Weeding 70%
Processing and storing crops 85%
Domestic work 95%
WOMEN
MEN
LOSS OF LAND
Many women – especially in Africa – have lost their traditional rights to the land they work because colonial laws and development policies have tended to allocate land only to men
FEMALE FARMERS
Women grow half of the world's food. But most agricultural advisors are men – who tend to give advice to men
Women as % of agricultural advisors
Women as % of agricultural labour force
8 5
19
47
25
2 9
40
0 7
Sub Saharan Africa
N. Africa and Middle East
LATIN AMERICA
AFRICA
ASIA
A Closer Look
Local studies show that national surveys invariably underestimate women's agricultural work
National figures
Local figures
EGYPT
3 6%
35 – 50%
PERU
2 6%
86%

Photo: Mike Abrahams/Network

17

Caring for a continent

'HAVE you many children?' the doctor asked.
'God has not been good to me. Of 16 born, only nine live,' he answered.
'Does your wife work?'
'No, she stays at home.'
'I see. How does she spend her day?'
'Well, she gets up at four in the morning, fetches water and wood, makes the fire and cooks breakfast. Then she goes to the river and washes clothes. After that she goes to town to get corn ground and buys what we need in the market. then she cooks the midday meal.'
'You come home at midday?'
'No, no. She brings the meal to me in the fields — about three kilometres from home.'
'And after that?'
'Well she takes care of the hens and pigs. And of course she looks after the children all day. Then she prepares the supper so it is ready when I come home.'
'Does she go to bed after supper?'
'No. I do. She has things to do around the house until nine o'clock.'
'But you say your wife doesn't work?'
'No. I told you. She stays at home.'

Back at home his wife, Fafia, kneels patiently weaving her eldest daughter's hair into a hundred tiny plaits. But she looks more like the girl's grandmother than her mother. Her rough worn hands move deftly over the thick, tight black curls, stopping only to push a small strand of grey back under her own scarf.

She has lived — and worked — all her life in this and the neighbouring village where she was born. But no statistician has counted the hours she has put in and no economist has assessed her contribution to her family's wellbeing. Even her husband fails to acknowledge her efforts. And until recently government planners tended to share her husband's attitude: because she does not get a wage for the work she does she becomes 'statistically invisible' says the United Nations. A man laying a water pipe under a city street is working for a living. A woman cutting a bale of grass to thatch the roof of her hut is simply doing a household chore.

Any change in attitude towards the contribution of Africa's women to Africa's development is likely to come too late to do much good for Fafia. But perhaps not for her daughter who, plaits neatly coiled and fixed to her head, runs off to the new village school. Already she can read and write. And the activities associated with the United Nations Decade of Women have focussed more of her government's attention on supporting and rewarding the work of women — the main nutritionists, teachers, health care workers, builders and agriculturalists in every family in Africa.

Source: *New Internationalist Calendar*, November 1984
By Malcolm Cox, Education Officer, Brisbane Botanical Gardens

Student Exercises

1. Read the passage, "Caring for a continent". Then study it more closely for information about Fafia's work. Draw a clock large enough to write on. Based on her husband's description, mark on the clock a brief hour-by-hour summary of Fafia's daily routine. Write "a.m." activities on the inside and "p.m." activities on the outside. (Estimate yourself the time needed for each task).

2. Write about your impression of Fafia.
   (a) What is your estimate of her age?
   (b) Where did she learn the skills required for her daily tasks?
   (c) What kind of work could her daughter hope to do one day as a result of her education?

3. What, according to the article, does Fafia (or any other woman like her) do that demonstrates her responsibilities to her family in these areas:
   (a) nutritionist
   (b) teacher
   (c) health care worker
   (d) builder
   (e) agriculturalist.

4. (a) What international agency initiated the Decade of Women?
   (b) What kind of attitude or problem was it aimed at reducing?

5. Various activities take Fafia much more time than we would spend on them.
   (a) Describe four of her routine tasks that require considerably more time or effort than we would think of spending on such tasks.
   (b) What tools, machines, appliances, etc. that we take for granted do you think would make some, if not all, of Fafia's work much easier?

6. What kinds of "things" do you think Fafia has to do around the house at night after supper? Why would they be more difficult to do during the rest of the day?

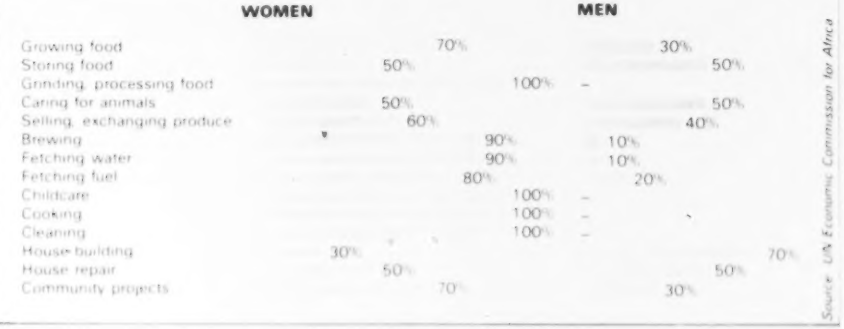
7. (a) Why do you think Fafia's husband, and others, do not consider her to be a person who does "work"?
   (b) Are there basic differences between them, or between what they do, that could make her officially a "non-worker"?
   (c) How do you feel her government could support or reward her work?

Continued on page 91

WOMEN IN AFRICA

In the fields

Between 60 and 80 per cent of agricultural work in Africa is done by women– on top of their household chores. In fact women in Africa do more agricultural work than in any other continent– and twice as much as African men.



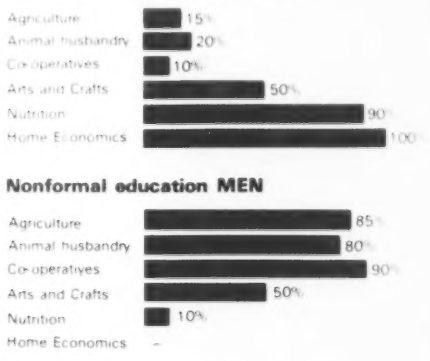
Source: UN Economic Commission for Africa

Photo: UNICEF

In many traditional African societies it is normal for women to support themselves, their children *and* their husbands. A quarter of a million households in Egypt, half a million in Kenya and a third of a million in Botswana are dependent on the productivity of their women.

At school

Though African women do the majority of the work, the majority of the education about that work is provided for African men.



Source: UN Economic Commission for Africa

More work

Development tends to increase women's workload: new tractors lessen a man's work of ploughing, new seeds and fertilisers mean more weeding and hoeing for women. One study found that introduction of new technology in some African villages increased women's work by 25 per cent.

Photo: Werner Gartung

Photo: Mark Edwards

Education can be the key to women's liberation, offering greater equality with men, better understanding of family planning and a chance to work outside the home.

Photo: Mark Edwards

18
A quiet hunger

THE widow leant back against the mud wall of her compound and gestured at the bowl of baobab leaves in front of her. 'Since our millet ran out,' she said, 'we've been living on those.' Suddenly the tranquillity of the scene took on a sinister aspect, as if it were haunted by the ghosts of her hunger.

The widow lives in a village that has never yet experienced mass famine. It lies in the south-east of Burkina Faso – a good two hundred kilometres away from the famine regions of the Sahel in West Africa. It will probably never hit the headlines. Yet few of these villagers are free of the fear of hunger.

Hunger is not a one-act drama. It wears people down over the years and we witness only the final scene. To a Pakistani it might mean selling a little more land to pay off debts to the village moneylender. To a Brazilian it might mean coaxing life from sandy soil that becomes more infertile with every planting. To a Kenyan it might mean the shortfall, the gap between the last harvest and the next becoming wider every year.

And the stars of this drama are not only the victims shaking their fists at the sky. There is the local merchant who buys up grain at harvest time and then sells it back at an inflated price to the same farmers when their food runs short. There is the government which puts its energy into export crops for the West, which sees development as a matter of prestige, building dams and conference centres for the cities instead of mills and wells for the villages. There are the politicians with no commitment to social justice. There are the Western banks and the International Monetary Fund, which force developing countries to act as laboratories for the most extreme monetarist experiments. There are the superpowers which sell their weapons and then use conflict in the poor world as part of their global chess match. And, ultimately, there is you and me for allowing this unholy machine to go on working.

Recognising that the world food problem is not just caused by lack of rain may make it harder to understand. But it also brings hope. Because this means there is something we can do about it.

by Chris Brazier

Photo: Maggie Murray/Format

Source: *New Internationalist Calendar*, February 1987
By Robin Hall, Charles Sturt University, Bathurst

Student Exercises

1. Read the passage titled, "A Quiet Hunger". Pay special attention to the fourth paragraph starting "And the stars of this drama are not only ..."
   (a) Who are the stars, and how are they linked with the problem of hunger?
   (b) Make up a diagram with HUNGER at the centre, and a list of "the stars" arranged around it, with arrows labelled to show their involvement.

2. Using the same information, list the same characters and link them with the five strategies (for feeding the world) that are suggested. Do this by making two columns, one headed "What's Wrong" containing the information in the same paragraph, and one headed "What's Right" listing the five strategies. Draw arrows to show the connections between the two columns.

3. Imagine your younger brother or sister, in Year 3, has been watching a TV programme on children overseas dying from hunger. S/he asks you to explain why it happens. What would you say? Prepare a reply in writing, and then share your answer with the rest of your class.

4. In the box called "Control the corporations" it is said that multinational corporations control production of high percentages of various commodities.
   (a) In a small group, work out a way of drawing a map of this information for display.
   (b) Make notes about the distributions you have mapped. Where are these commodities packaged and processed? You could annotate your map with labels from packages.
   (c) Compare the patterns of production and processing. What do you notice? Why is this so?

5. (a) What is agribusiness?
   (b) If one cause of hunger is food prices, and if the grain prices are controlled by the grain trade, does this mean Australian farmers are partly responsible for world hunger? Why?

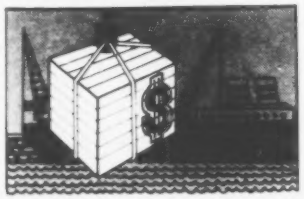
6. (a) Coming back to the "stars of this drama", divide the main characters in terms of whether they are outsiders to the countries suffering food shortages, or whether they are citizens of those countries.
   (b) Do you think that hunger is caused more by external factors or by internal factors? Why?
   (c) Take a survey of other students in your class. Is there a difference of opinion on this question? If so, set up a class debate to exchange your points of view.

Continued on page 92

HOW TO FEED THE WORLD

Food aid is necessary in a crisis but it is no long-term solution. Here are five ways to address the causes of world hunger.

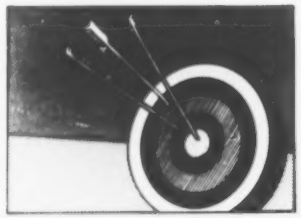
Stop using money against the poor



Debt has been crippling the Third World over the last five years. Countries can be forced to sacrifice as much as half their export earnings as repayments on debts to Western banks. And before the West offers new loans it insists on drastic cuts in welfare spending which hit the deprived hardest. Debt repayments should never amount to more than 10 per cent of a country's export earnings.

● In 1983 developing countries paid the Western banks 21 billion dollars in debt servicing – seven billion dollars more than they were able to borrow that year.

Aim for social justice



Hunger only affects the poor – there are no hungry countries, just bigger or smaller numbers of hungry people within countries. A government's commitment to social justice is not the icing on the cake – it is the cake itself. The only way to end hunger is to reduce poverty and inequality, and make feeding people a priority.

● Cuba's life expectancy is, at 75, now higher than that of Britain (74) and New Zealand (74). Although the Caribbean island is much poorer, its distribution of wealth is much fairer, and it has made equal sharing of food a priority.

Give back the land

Much of the world's cultivable land is owned by people with large farms – particularly in the Americas. Left to itself this will become worse, not better, since it is the large farmers who can borrow and afford mechanization and fertiliser. Land reform is not only essential for reasons of justice – it also increases food production, since smallholders farm much more efficiently than the big landowners. But sharing out the land will not work if inequality persists elsewhere in society.

● In the 1970s in Central America the richest 10% of landowners controlled 80% of all farmland.

● A United Nations study of land use in Central America showed that farmers who owned up to four hectares cultivated 72% of their land, while farmers with over 35 hectares cultivated only 14%.

Illustrations: Clive Offley

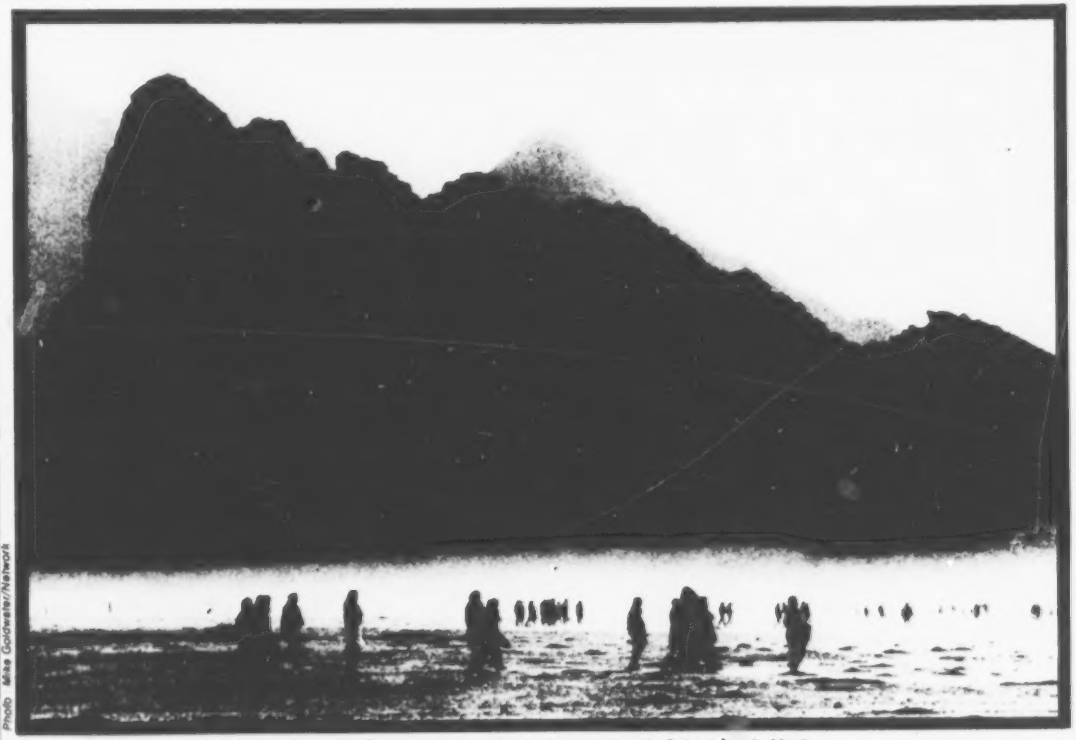
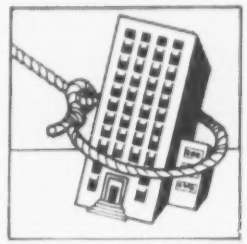


Photo: Mike Goldwater/Network

Walking on in hope. During the 1984 famine, refugees from Tigray in Ethiopia continue their long march into the Sudan in search of food.

Control the corporations



The world is now a supermarket for the rich world's consumers – and the managers of that supermarket are the multinational agribusiness corporations. These companies control production prices, often holding small farmers under contract for their export crops. This way they can buy harvests at controlled prices while leaving the risks of bad weather and plant disease on the shoulders of the individual farmer.

● Multinational corporations are estimated by the United Nations to control 85% of world cocoa, 85 – 90% of tobacco, 85% of tea, 85 – 90% of coffee, 60% of sugar, and 90% of forest products.

Put food first

Developing countries are still locked into a farming system created for the benefit of the rich world. Their best land and resources are used to grow cash crops for export rather than food. The trend away from crops for local consumption must be halted, and farmers paid more for their harvests.

● Almost everyone in the Sahel region of Africa eats non-irrigated, drought-resistant crops such as millet and sorghum. Yet of the billions of dollars in aid given to the region after the drought in the early 1970s only 16% was spent on improving the cultivation of these food crops.

19

An empty revolution

THERE is a much more sweeping food revolution under way in the Third World, one far more dramatic than the increased consumption of new strains of wheat or rice. *The consequence of this revolution is to shrink, not expand, the food supply.*

Mexico is but one example of this hidden revolution. While two-thirds of Mexico's people are chronically undernourished and its population is growing fast, no greater area is planted today in the foods most consumed by the poor – corn and beans – than 20 years ago. Even the area growing wheat – the crop targeted by Green Revolution research and investment – doesn't hold a candle to that covered by Mexico's real postwar boom crop.

The real winner is sorghum, a feed grain used mostly to produce poultry, eggs and milk for the urban classes. Sorghum was virtually unknown in Mexico in 1958, but by 1980 it covered twice the acreage of wheat. Sorghum spread at such spectacular speed largely in response to the demand for livestock products by the top 15 per cent of Mexicans whose purchasing power enables them to consume half Mexico's food. Sorghum also spread because it requires less labor, is drought resistant – and farmers don't have to worry about midnight harvests by hungry peasants because this variety is not for human consumption.

Worldwide over 40 per cent of all grain goes to livestock. And in the Third World, the demand for feed is growing 75 per cent faster than the demand for food. Increasingly soybeans and cassava, both basic foods for many people in developing countries, are grown as livestock feed for export.

In the late 1970s, we traveled to north-west Mexico to see with our own eyes where the breakthrough wheat research was carried out over 20 years ago. We wound through mile after mile of cropland, all well watered by costly government-built irrigation. Mostly we saw cotton, grapes and vegetables – asparagus, cucumbers, tomatoes and peppers – largely destined for export.

Stopping at a government agricultural research station, we asked why this prime land was planted in export crops when we had seen so many hungry people. Scribbling a few figures on a scrap of paper, the young agronomist explained, 'It's quite simple. An entrepreneur in this area can make 20 times more by growing tomatoes for export than food for Mexicans.'

The story of north-west Mexico is not unique. Overall, food exports, often luxury items, are growing twice as fast as total food production in the Third World. Thus perhaps more decisive for the hungry than the much-heralded Green Revolution is this almost invisible one. In this revolution, production shifts out of basic foods and towards the tastes of those who pay. They are not the hungry.

From World Hunger, Twelve Myths by F. M. Lappe and J. Collins, Grove Press, 1987.

Source: *New Internationalist Calendar*, June 1989
By Graham White , Catholic College of Education, Sydney

Student Exercises

1. Read the passage, "An Empty Revolution", and answer the following questions:
   (a) What are the two food crops most commonly consumed by the poor in Mexico?
   (b) What is the other food crop that is consumed as a staple?
   (c) What is sorghum and what is it mostly used for?
   (d) Which group of people have benefited most from the expansion of sorghum production?
   (e) Give three reasons why the growing of sorghum has increased so rapidly over the last thirty years.
   (f) What is happening to many of the traditional food crops?
   (g) What types of crops are being grown in areas that had originally been developed to expand wheat production? What are they being used for?
   (h) Why have export crops, including food crops, expanded at the expense of crops to feed the Mexican population?

2. Study the table and information about "The Hungry World, 1970-80". Write a series of points that clearly brings out the situation being described.

3. Study the graph, "Food Production in Asia and Africa, 1971-84, per head".
   (a) In which group of countries has food production expanded the most?
   (b) Which country has had the most success?
   (c) In which group of countries has food production declined?

4. Using the information contained in the table, "The Results of the Green Revolution", as a basis, make a list of the arguments (for and against) that could be used in a class debate on the topic, "The benefits of the green revolution have been outweighed by the drawbacks".

5. Why hasn't the Green Revolution, in itself, necessarily led to increased food supplies being available to all?

6. Why might the government of Mexico have allowed agricultural land improved by government-sponsored irrigation projects and agricultural research stations to be used for the growing of export crops?

7. If you were a poor farmer living in the north-west of Mexico how would you feel about the agricultural developments going on around you?

Continued on page 92

Food and the Green Revolution

Selective plant breeding has occurred since people first took up planting crops – in that they pick the best seeds for next year's sowing. But harvest yields have stayed much the same. Some 20 years ago, however, research found new varieties of high-yielding seeds – wheat, maize and rice – which could double harvests. By 1985 Green Revolution seeds were being sown on half the acreage devoted to rice and wheat in the Third World.

THE HUNGRY WORLD 1970 – 1980

Eating too little to hold down a job
(below 90% of UN calorie requirements)

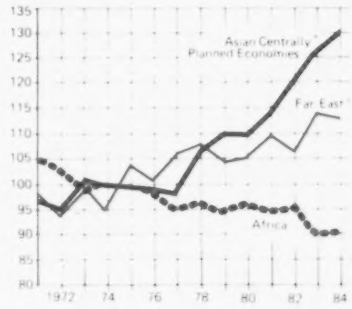
Numbers affected in 1980	Change since 1970	Share of total population of developing countries affected	Change in share affected since 1970
730 mill	+ 10%	34%	- 6%

By 1980 730 million people had significantly too little to eat in the Third World, despite the great advances in food production over the previous decade. This was 10% more *in numbers* than in 1970, but because of the bigger global population, *in percentage terms* it was a reduction from 40% to 34% of the total population of these 87 developing countries.

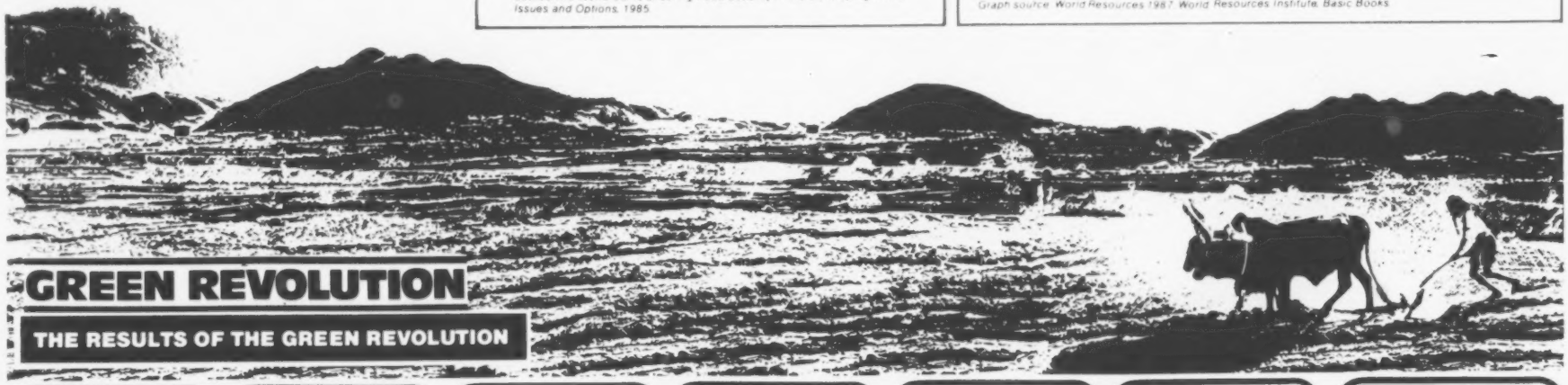
Source The World Bank, Ensuring Food Security in the Developing World: Issues and Options, 1985.

FOOD PRODUCTION IN ASIA AND AFRICA, 1971 – 84, per head.

Food production has been expanding faster than demand almost everywhere apart from Africa, primarily because of Green Revolution technologies. But the greatest success story has been China. Almost half of all the land in the world planted with high-yielding rice is in China. And distribution is effective too. Probably less than 3% of Chinese suffer undernutrition compared with the 30% to 40% of Indians. (World Hunger, Twelve Myths by F.M.Lappé & J.Collins, Grove Press Inc. 1987.)



Graph source: World Resources 1987, World Resources Institute, Basic Books.



GREEN REVOLUTION

THE RESULTS OF THE GREEN REVOLUTION

⊕ The world is better off because there is far more food available from bigger harvests than 20 years ago.

⊖ Bigger granaries storing more grain are not enough. Hungry people need to be eating more. And food in storage is not being distributed to the needy.

⊕ Significant and populous countries like India, Indonesia and Thailand have become self-sufficient in basic foodstuffs. They are no longer dependent on North American and European food aid.

⊖ But implementing Green Revolution policies has increased dependency on imported seeds, fertilizers and pesticides and farm machinery.

⊕ Former food importers like India and Thailand now export grain, earning useful foreign exchange.

⊖ Imports of seeds, petrochemical fertilizers, fuel for machinery itself all cost valuable foreign exchange.

⊕ New farming methods with irrigation can bring all year round employment. No longer do workers have to be laid off in the dry season.

⊖ Often agricultural profits are invested in tractors which reduce employment.

⊕ With bigger harvests farmers earn more and the price of food stays constant or even becomes cheaper in the marketplace.

⊖ For the small farmers who cannot afford the Green Revolution seeds and other technology, the lower prices for their harvests mean real hardship. Often they have to sell off to the big landowners, bringing an increasing gap between rich and poor.

⊕ The environmental impact of impoverished rural people – who cut down trees – is lessened by the urban migration.

⊖ New farming methods can bring an increase in waterborne diseases (with irrigation), the development of super pests (resistant to insecticides) and desertification (through the salinization of waterlogged fields).

⊕⊖ **ASSESSMENT**

Increasing food production does not stem hunger on its own. It is possible to have both more food and more hunger. 'If the poor don't have money to buy food,' a World Bank report said, 'increased production won't help them.' Nevertheless increasing harvests by 30% is the equivalent of discovering 30% more farming land; and as the population is increasing that is a welcome relief.

Photo: Mike Goldwater/Network

20

Terraces of diversity

WHEN you settle down to supper tonight, there will be little on your plate that doesn't come directly or indirectly from the Third World. That is not just because food is imported from the hungry continents. It is also because Western farming is almost entirely dependent on the profusion of seeds found in the developing world. The genetic origins of our food lie there.

In a typical salad our tomatoes carry genes from Central America, our cucumber have chromosomes and genes that originate in Burma; the carrot and onion were domesticated in Central Asia while the home of celery and lettuce is the Mediterranean. As for our staples, potatoes come from the Andes and most of our beans from other parts of Latin America. Most cereals were first cultivated in the Near East and China. Even the fodder for our livestock traces its genetic origins to South America and Central Asia. It is no accident that the great ancient civilisations were based in the world's centres of genetic diversity where many strains of seed existed.

Photo: FAO

But our well-stocked larders are under threat. The problem is genetic erosion. The genetic mix of seeds which safeguards the world's harvests is being lost. For the more the crop seeds move away from their genetic 'homeland' the more their genetic diversity declines. And if a transplanted crop has a narrow genetic base it can lead to disaster. It was because only a few strains of potato were brought from Latin America and were reproduced again and again, that two centuries later the Irish potato blight destroyed over 90 per cent of the crop, resulting in death by starvation of two million people.

The more uniform seeds are, the more vulnerable they become to disease. No one wheat or rice variety can provide adequate protection against monsoon failures, pests or blight. Practical farmers welcome a dozen or more strains of wheat in their fields because despite drought, flood or blight something will make it through to harvest. Unfortunately the centralised seed development of the giant international seed companies and the high pressure marketing of new 'green revolution' style high-yield varieties of seed are spreading a dangerous conformity around the globe and destroying the planet's broad genetic base. Today the US millet crop, for example, comes from just three varieties of seed. In the 'breadbasket of the world', the Canadian Prairies, 75 per cent of the wheat harvest comes from just four varieties of seed.

As the genetic uniformity of the world's crops increases, Western seed companies, subsidiaries of giants like Shell, Union Carbide, Ciba Geigy and Sandoz, depend more and more on Third World 'seed banks' found in small peasant fields and remote forests. Fresh infusions of genetic material are needed if they are to keep one step ahead of pests and plant disease.

The natural food systems are interdependent. It is a curious twist of history that the most over-fed nations are in the 'gene-poor' regions. And it's even more curious that the rich genetic banks which protect the world's future food supplies are often found in the most hungry parts of the world – the greatest of gifts from the poor to the rich.

by Dexter Tiranti

Source: *New Internationalist Calendar*, May 1987
By Andrew Hamson, Brisbane College of Advanced Education

Student Exercises

1. Read the passage, "Terraces of Diversity", and answer the following questions:
   (a) Where do the seeds for most of our fruit and vegetables come from?
   (b) List four types of food and the region they come from.

2. Use a dictionary, if necessary, to define:
   (a) genetic diversity
   (b) genetic erosion.

3. What is meant by a crop having a "narrow genetic base" and how may this lead to possible disaster?

4. Why do practical farmers welcome a variety of seed strains in their fields?

5. What is the "Green Revolution" and what have been some of its results?

6. (a) What does the author mean when he states that seed banks are "the greatest gifts from the poor to the rich"?
   (b) What do you think is his opinion of the multinational companies involved? Why?
   (c) How does the author communicate this opinion?

7. Look at the "Weighing the Crop" illustration in the large diagram.
   (a) Why is the "New Varieties" sack larger than the "Traditional Varieties" sack?
   (b) What is represented by the rope-strands?
   (c) How are these significant in relation to the size of the sacks?
   (d) What is the overall message implied by this illustration?

8. Study the world map of the earth's genetic pools of seed production.
   (a) What do each of the circled areas have in common?
   (b) What is the significance of this?

9. Read the short passage under the "dot drawing" of the farmer.
   (a) What were the problems facing farmers using the hybrid varieties of rice in the Philippines?
   (b) Why was the original Taiwan strain a better variety and what was limiting its widespread use?
   (c) Imagine you are a farmer in the Philippines. What strengths would you look for in your seed selection? Which type(s) of seed would you use for your rice crop?

Continued on page 93

THE DWINDLING SEEDBANK

Our future world harvests are in danger as the genetic diversity of crops everywhere is being eroded.

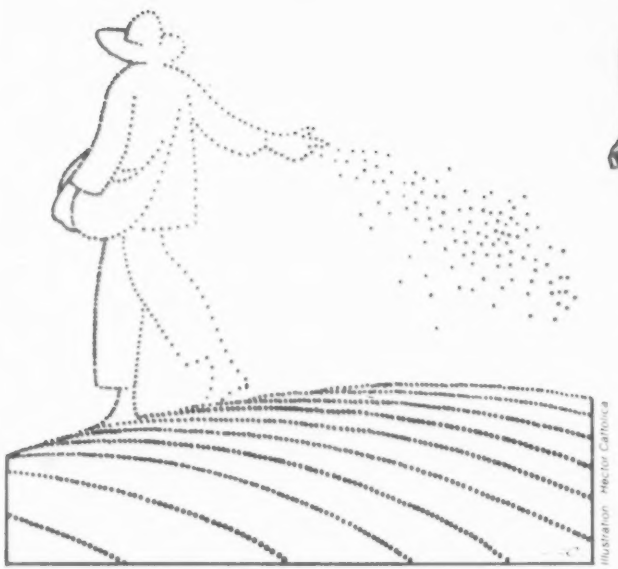
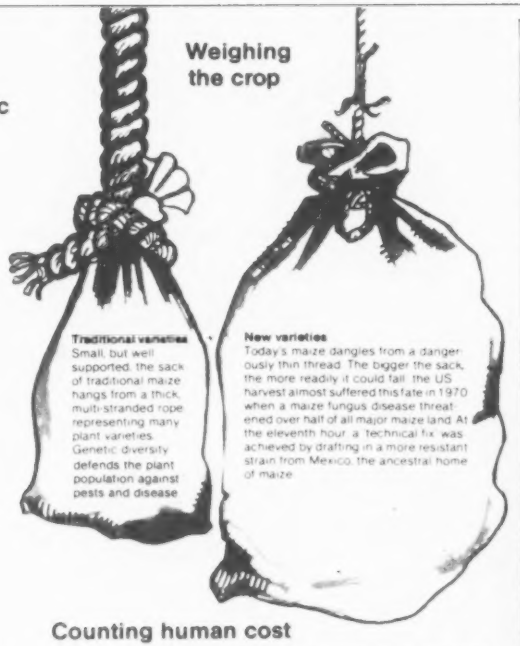


Illustration Hector Catterick

A few years ago one of the prized developments of the Green Revolution, a strain of rice known as IR-8, was hit by Tungro disease in the Philippines. When rice-growers switched to another form, IR-20, this hybrid soon proved badly vulnerable to grassy stunt virus and brown hopper insects. So farmers moved on to IR-26, a super-hybrid that turned out to be exceptionally resistant to almost all Philippine diseases and insect pests. But it proved too fragile for the islands' strong winds. Whereupon plant breeders decided to try an original Taiwan strain that had shown an unusual capacity to stand up to winds - only to find that it had been all but eliminated by Taiwan farmers who by then had planted virtually all rice lands with IR-8. - Dr Norman Myers, Kenya, 1978.

Weighing the crop



Traditional varieties
Small, but well supported, the sack of traditional maize hangs from a thick, multi-stranded rope representing many plant varieties. Genetic diversity defends the plant population against pests and disease

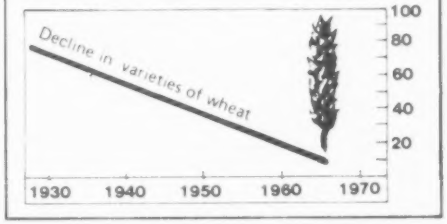
New varieties
Today's maize dangles from a dangerously thin thread. The bigger the sack, the more readily it could fall: the US harvest almost suffered this fate in 1970 when a maize fungus disease threatened over half of all major maize land. At the eleventh hour a 'technical fix' was achieved by drafting in a more resistant strain from Mexico, the ancestral home of maize.

Counting human cost

The potential impact of a collapse in harvests of single seed variety crops becomes ever greater as increasing numbers of people come to depend on a shrinking number of crop varieties. If the world maize crop failed tomorrow, it would do much more than cut supplies of food. It would affect aspirin, penicillin, tyres, plastics, even the 'finish' of these pages.

Loss of diversity

Genetic erosion is affecting even areas of high diversity. Greece has lost 95% of its native wheat varieties in just 40 years.



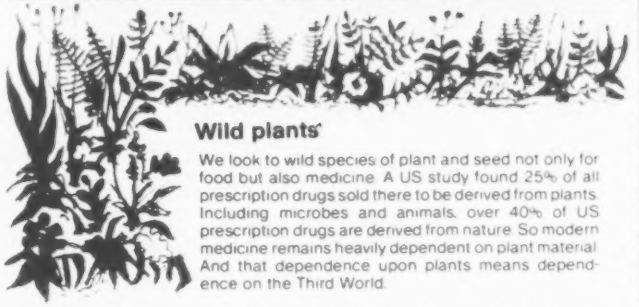
The Genetic Pools dry up

The rings on this map show the world's great pools of genetic diversity - called Vavilov Centres after the Russian botanist who first identified them.

While today's temperate zones were frozen in the ice ages, the vegetative assets of the tropical zones flourished. The result is that you will find on the slopes of one small volcano in the Philippines more wooded plant species than in the whole of Canada. The Amazon river contains ten times as many living species as there are in Europe.

By observing natural mutation, and by careful seed selection, Third World farmers have developed an astonishing range of crop variety. And it is essential to preserve this variety because no one wheat or rice strain can provide adequate protection against pests, rusts or blights.

These 'genetic pools' are constantly being drawn upon by Western farmers: the common bean grown in the USA, for instance, contains disease-resistant traits from Mexico, Chile, Syria, Turkey and El Salvador. But now these sources are drying up as the new uniform high-yielding hybrids are being sold back to the Third World and displacing the original varieties.



Wild plants

We look to wild species of plant and seed not only for food but also medicine. A US study found 25% of all prescription drugs sold there to be derived from plants. Including microbes and animals, over 40% of US prescription drugs are derived from nature. So modern medicine remains heavily dependent on plant material. And that dependence upon plants means dependence on the Third World.

Sources: *Seeds of the Earth* by Pat Mooney/*The GAIA Atlas of Planetary Management*

21

Harvesting poison

'FIRST they tell us to buy their poisons to help us kill the pests,' says Aguilar bitterly. 'Now they say we need new poisons to combat the problems caused by the first ones. My God, while we are doing that I think these insects will eat us alive.'

Anisar Aguilar is a Latin American peasant farmer whose fields have been swamped by a strange new plague of moths that nothing will shift. He lives in an isolated community in the high, humid subtropics. His main crop is tomatoes. Back in 1965 peasants who went to the town of Santa Cruz came back with fantastic stories. They had been told by the shopkeepers about the amazing new pesticides which would soon make the farmers rich.

'First one bought,' says Aguilar, 'then another. After that there was an avalanche of salesmen. Now look where we are.'

The energy and propaganda of the salesmen were overpowering and enormous quantities were sold. But the chemicals were applied more or less indiscriminately – often in the wrong way and at the wrong time – under the guidance of salesmen who were as badly informed as the farmers.

'It wasn't our fault,' Aguilar claims. 'We were so excited by the thought that we would soon be free of the whims of nature. What would you have done?'

But after three years they were in for a nasty surprise. Despite the mixture of powerful chemicals on the tomatoes, a few mutant moths survived. They reproduced themselves at a terrifying rate, devouring all the tomatoes they could find. The chemicals, it seemed, had disturbed the previous natural balance by killing not only the pests but their natural predators. So the new moth has the crop all to itself.

The farmers' first reaction was to increase the dose of the pesticide and then try one new chemical after another. But the story was to follow an all too familiar pattern. It just needed one or two resistant moths to survive and they could produce a new and tougher strain, immune to the most powerful pesticide.

New salesmen have now arrived with new pesticides which they say will finish off the evil moth. And indeed they have produced good results to date. But Aguilar is suspicious of what will happen in three years time. As he says 'A butterfly usually brings behind it a bigger moth.'

Some of Aguilar's friends are in despair. They have not only seen their harvests disappear but they feel they have lost the creative potential of the land itself. So serious is the situation that the suicide rate amongst the peasants has dramatically increased. 'They think they are the killers of 'Pachamama' – Mother Earth. Now they are committing suicide – by drinking the pesticide that caused all their problems,' says Aguilar sadly.

Aguilar himself is more hopeful. He has returned to more natural methods. He is letting some of his land lie fallow and changing his irrigation system around in the hope that the moths will go away.

Source: *New Internationalist Calendar*, August 1985
By Christine Dunbar, Kogarah Marist High School, Sydney

Student Exercises

1. Read the passage, "Harvesting Poison", and answer the following questions:
   (a) What is the problem facing Aguilar?
   (b) Where did the new ideas originate? How did his isolated community become involved?
   (c) "The wrong way at the wrong time" is a big statement to explain the problem. What caused this inappropriate use of chemicals?
   (d) Describe briefly how the ecological balance was disturbed?
   (e) How has Aguilar responded to this situation?

2. Study the diagram, "Pesticides Their Use and Abuse":
   (a) Pesticides effects are not just limited to crops. What other areas of our life are being influenced by them?
   (b) Insects and mites do not always respond negatively to pesticide.
   (c) What pattern is emerging to describe the growing resistance of insects and mites.
   (d) Is the resistance to pesticides growing as a geometric or arithmetic rate? If this situation continues, what does this say for insect resistance by the year 2000?
   (e) Name four pests of major crops, and say which crops they affect.

3. Look at a world map showing the areas under cultivation of each of these crops. Complete the following table:

Pest	Crop	Areas of World Which Could be Affected
	Rice	
	Cotton	
	Wheat	
	Potatoes	
	Mixed Farming	

Continued on page 93

PESTICIDES: THEIR USE AND ABUSE

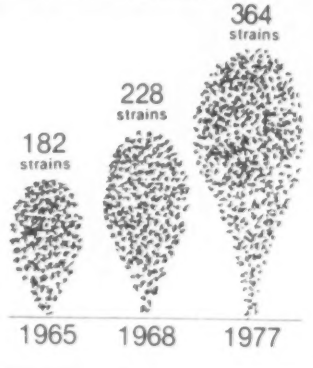
Illustration: Bill Sanderson

Pesticide companies are promoting effective but poisonous solutions in countries where no protective clothing is worn, and spray planes douse not just crops but people in fields, adjoining houses and water supplies. More than 30 per cent of all pesticides exported from the United States are regarded as too dangerous to be approved for use within the country.

Resistance to the chemicals

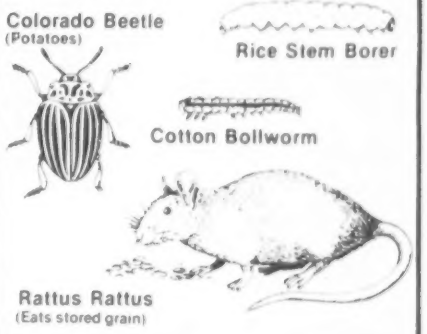
GROWING RESISTANCE

Each year insects and mites develop more strains resistant to pesticides



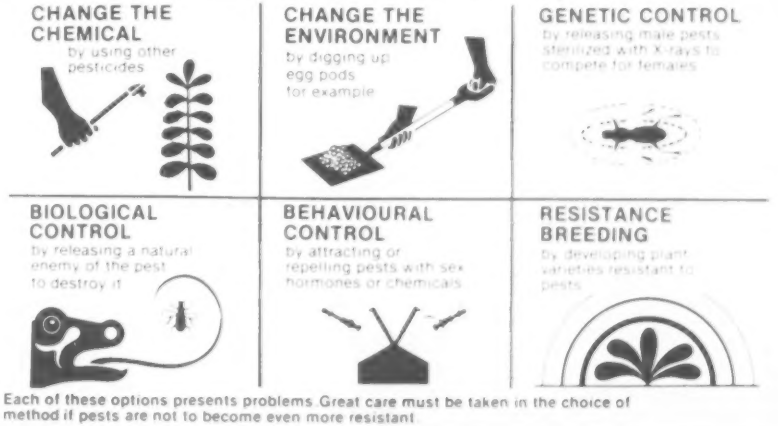
THE SUPER-PESTS

Many pests of major crops have developed strains resistant to important groups of pesticides:



ATTACKING THE SUPER-PESTS

If a pest develops resistance to a pesticide there is a range of options:


CHANGE THE CHEMICAL
by using other pesticides
CHANGE THE ENVIRONMENT
by digging up egg pods for example
GENETIC CONTROL
by releasing male pests sterilized with X-rays to compete for females
BIOLOGICAL CONTROL
by releasing a natural enemy of the pest to destroy it
BEHAVIOURAL CONTROL
by attracting or repelling pests with sex hormones or chemicals
RESISTANCE BREEDING
By developing plant varieties resistant to pests

Each of these options presents problems. Great care must be taken in the choice of method if pests are not to become even more resistant.

Illustration: Peter Sullivan

22

Fire on their backs

I'D BEEN in the village for a week and I felt I was beginning to understand the place. My grasp of the local language was pretty shaky but I didn't mind making a fool of myself when I tried to act out what I meant to say and, besides, simply watching life go on taught me a lot.

But I don't think it dawned on me how daunting a task the search for firewood has become until I went along with Nila and her brother one day. We set out in the full heat of the afternoon so as to be carrying the wood back when it was cooler and then plodded on over bare African hills that seemed indistinguishable from one another to my eyes. The children chattered away and I'd pick up the odd word, but not enough to understand the jokes at my expense that sent them into giggles every now and then.

It was two hours before we came upon anything that might pass for a tree – a sickly stump that was barely hanging on to life. There were others farther on that looked a little healthier – I pointed at them but Nila shook her head firmly and marched on. She knew what she was doing, this forceful girl of eleven – if we'd cropped those trees they'd soon have ended up as stumps. When we reached a more suitable place, Niia showed me how to cut the branches to do least harm to the tree. It took us another hour to bundle up enough to make for home, the children looking from behind like trees with legs as they bent beneath their loads. Had I taken a photo it would have served as an image of child labour to stir Western hearts to outrage but, rightly or wrongly, it would have left out their cheerful chatter.

I'd had more than enough by the end of the first hour's walk, let alone the second, and coming upon the village in the fading light it seemed like home, not like just another object of study. I ate with Nila's family and, as usual, once the meal was cooked the fire was allowed to die – wood is far too precious to be used just for light.

And so the long African night began, illuminated only by the moon and the glowing embers. I thought of the way I walk into my Western home and flip a switch here for light, another there for heat, and swore I'd never do it again without remembering Nila and the other villagers.

Source: *New Internationalist Calendar*, September 1986
By Stephen Robinson, St Patrick's College, Mackay

Student Exercises

1. Read the passage, "Fire on their Backs", and answer the following questions:
   (a) In the phrase, "how daunting a task" (Paragraph 2), what does "daunting" mean and what is daunting about this labour practice? (Select ideas from the passage and list them.)
   (b) Select two practices that show how the villagers have learnt to live with their environment by conservation of energy and fuel.
   (c) How would you describe Nila's attitude to collecting firewood?
   (d) Estimate the amount of time Nila and her brother spend collecting fuelwood each day?
   (e) In what sense is the writer a part of the African community? In what ways is s/he an outsider? Give reasons for your ideas by reference to the passage.

2. In the passage, the writer talks of taking a photograph.
   (a) Does the accompanying photograph compliment the passage? What feelings did the writer want or wish to communicate to the reader? What sense of situation and issue does the photograph create for readers? Which of these two forms has the greater impact on you? Why is this so?
   (b) Develop a title/caption for the photograph. Choose your words very carefully to convey what a reader would need to know! (Use no more than six words and think about your purpose: to inform, to highlight, or to focus, etc.)

3. Examine the Peter's Projection map of the fuelwood situation in the "developing" South.
   (a) List the main patterns that occur in each of the Americas, Africa and Asia.
   (b) In the title of the map, what does the word "availability" mean or suggest?
   (c) What factors govern or influence "availability" of a resource? Apply this information to the case of fuelwood. How/why is this so? How does this link to the key term "deficit"?
   (d) With or to what are analysts usually refering when they speak of an "energy crisis"? Explain the point being made in the section heading, " Wood: The other energy crisis".

4. Use the "Learning on Trees" information box for these activities.
   (a) In your own words, state exactly what the heading of the table, "Wood as a percentage ...", is intended to show.
   (b) Study the table. Use it to construct a new table with five headings: Nation, Percent, Rank, Continent and Further Comments. Here are some steps to do this:

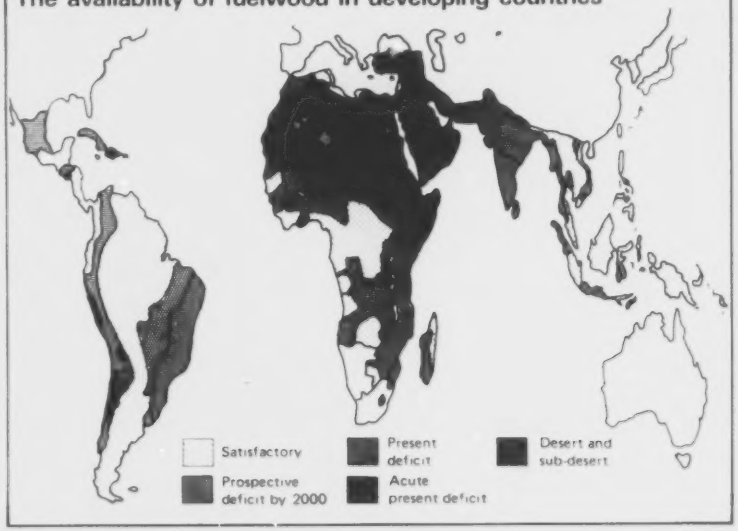
Continued on page 94

Wood

The other energy crisis

Trees are disappearing all over the world – and many developing countries depend on wood for over 90% of their energy needs. It is the poor who are hit hardest – the trek from the village in search of firewood is becoming longer and more desperate every year.

The availability of fuelwood in developing countries



Leaning on trees

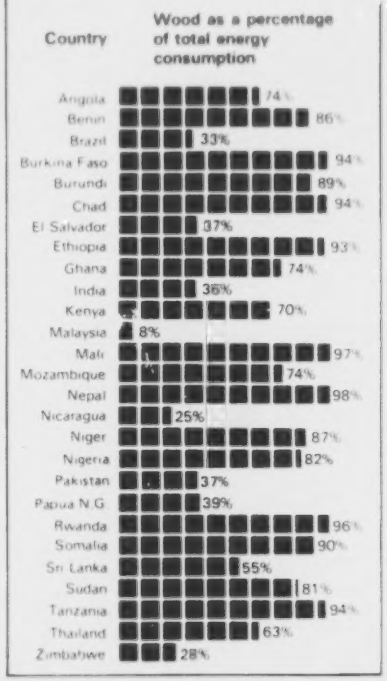


Illustration: Baby Tay al Din

Deforestation Problems

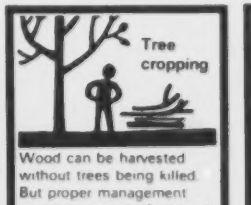
Forests disappear for two reasons – people need land for farming and wood for fuel.

People must walk further to gather wood, make do with colder huts, fewer hot meals and less light at night.

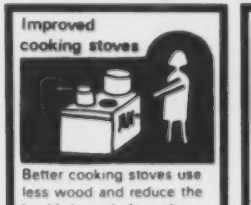
Without tree roots to bind it topsoil is swept by rain into rivers leaving the land less able to support crops and trees.

Possible solutions

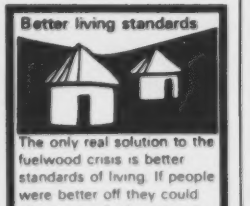
Foresters must start helping people plant trees around their homes, farms and villages – and take notice of their views.



Wood can be harvested without trees being killed. But proper management means serving the fuel needs of the poorest as well as protecting trees.



Better cooking stoves use less wood and reduce the health hazards from the smoke of an open fire. But they are often too expensive.



The only real solution to the fuelwood crisis is better standards of living. If people were better off they could afford other fuels and end their desperate search for wood.

23

A precious burden

NYERI stoops as she walks, her eyes fixed on the red earth of the track below. A huge metal drum weighs her down, balanced on her back and held in place by a leather thong which loops around her forehead. Inside it is enough water for her three children, her mother and her husband to get them through another day's drinking, another day's cooking, another day's washing.

Nyeri is a Kikuyu, who lives in the dry country around Kenya's rift valley rather than on the more moist, more fertile earth of the highlands. Like all Kikuyu women, she is proud of her strength and endurance and rather scornful of the physical prowess of women in other tribes who tend, like most other women in the world, to carry their water in pots on their heads.

But however they choose to carry it, the vast majority of rural women in Africa, Asia and Latin America know that, if the family is to have enough water to drink and to stay clean, then carry it they must. The idea of running water in the home is sheer fantasy. The most they can hope for is a communal hand pump or standpipe. And if this running water were one day to appear, it would not be its cleanliness that would most delight them – important though that is in communities where 80 per cent of all diseases are water-related. Instead the greatest blessing would be the shorter distance they had to walk with their daily burden.

Almost as soon as they can walk, small girls go with their mothers and older sisters to the well or river. The tin they carry grows bigger as they get older, starting out no larger than a fruit juice can and ending with the four-gallon earthenware jars or brass pots of their mothers. Carrying water is so integral to their lives that it is scarcely something to grumble about. Yet in some parts of Africa women spend eight hours a day collecting water. The journey is exhausting, eating into the time and energy they have for other things. And the continual water bearing can distort the pelvis of young girls, making the recurrent cycles of pregnancy and childbirth more dangerous.

But Nyeri does not think about the effects on her body: the danger of her children going without water is much more pressing. Nor does she worry about looking like a beast of burden as she stoops under her load. Not for the Kikuyu the superb deportment of their African sisters who carry their loads on top of their heads, gliding elegantly along, full of rhythm and straight-backed stateliness.

Nyeri would laugh at the idea that grace and posture are worth considering. Water is needed for the family. It is a woman's task to fetch it. And if a Kikuyu woman can carry 50 or 60 pounds from the river at a time, then she must be doing better than a woman whose neck muscles only permit her to carry 20.

Source: *New Internationalist Calendar*, March 1989
By Suzanne Hollands and Jacinta Kerley, Brisbane College of Advanced Education

Student Exercises

1. Study the passage, "A Precious Burden", and answer the following questions:
   (a) Where in Kenya does Nyeri live?
   (b) How does Nyeri carry the metal drum?
   (c) How does Nyeri's family use the water?
   (d) What do you think a Kikuyu is? What evidence can you find from the passage to support your explanation?

2. (a) Almost as soon as girls can walk, they begin carrying very small loads of water. How are they trained to carry the heavy loads?
   (b) Why do Kikuyu women prefer to carry their water on their backs rather than on their heads, as the women from other tribes do?
   (c) What effect could continual water bearing have on the bodies of young girls?

3. Kikuyu women would delight in having running water in their homes. List the reasons why, in order of priority, from a Kikuyu woman's point of view.

4. (a) Do you think it is right that the Kikuyu women should carry such heavy loads? Why don't they complain?
   (b) How would you feel if you had to do these women's jobs as your career? Why?

5. How do you think the tribal woman's job of carrying the water could be made easier? List three possibilities.

6. Do you think that the title "A Precious Burden" sums up the overall message of the passage? Why or why not? Perhaps you could suggest an alternative title.

7. Study the information on the page titled "Water". Water is vital for life. In some areas of the world, however, water can be detrimental to human health.
   (a) Why is water vital for life?
   (b) What diseases can water carry?
   (c) Why does water carry diseases in some parts of the world but not in others?

8. For what purposes does the average rich world citizen use water each day? How does this differ from the daily water usage of the Kikuyus?

9. Draw a pie-graph to represent the average United States water consumption for one day. This pie-graph should account for personal use, agricultural use and industrial use of water.

Continued on page 95

Vital for life

Water is vital for life. It is two thirds of our body's weight and 90 per cent of its volume. It has the power to quench thirst, to irrigate crops and to wash away disease. But it is also the bearer of bilharzia and malaria, diarrhoea and dysentery. And while the rich use as much as they like, the poor can barely get enough to survive.

WATER

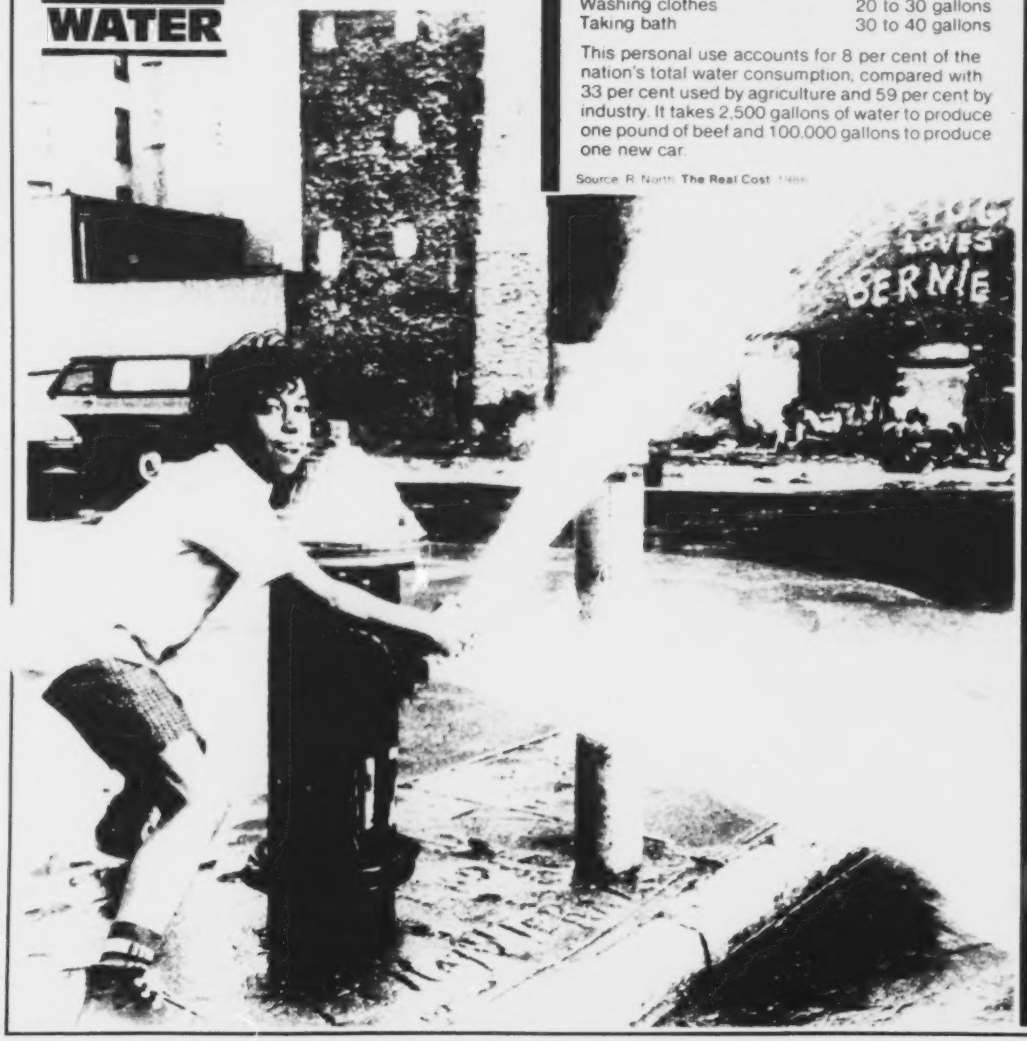


Photo: Mark Edwards

RICH WORLD . . .

The average US citizen uses 160 (American) gallons of water per day.

Example	Water used
Each flush of a toilet	3 to 5 gallons
Showering	5 gallons per minute
Cooking (three meals)	8 gallons
Dishwashing (three meals)	10 gallons
Washing clothes	20 to 30 gallons
Taking bath	30 to 40 gallons

This personal use accounts for 8 per cent of the nation's total water consumption, compared with 33 per cent used by agriculture and 59 per cent by industry. It takes 2,500 gallons of water to produce one pound of beef and 100,000 gallons to produce one new car.

Source: R. North, **The Real Cost**, 1988

POOR WORLD . . .

The World Health Organization estimates that 80 per cent of all sickness and disease can be attributed to inadequate water and sanitation. As many as 50,000 people die every day from diseases associated with dirty water. And 1,500 million people are suffering from one of these diseases on that same day.

Every person needs one gallon of water a day for cooking and drinking. But at least a further five gallons are needed for each person to stay clean and healthy.

In Third World cities paying for a water carrier's services can consume around 10 per cent of a worker's total income.

In rural areas water is carried by women from wells and rivers. And the farther away the water source is from the house, the less water a family can afford to use.

Type of supply	Amount of water used (in two-gallon buckets)
No tap or standpipe	1.2
Standpipe	2.5
Single household tap	4.7
Several household taps	16.5

The International Drinking Water Supply and Sanitation Decade was declared by the United Nations in 1980. Its goal was to provide clean water and sanitation for all the world's people by 1990. This meant standpipes and pit latrines in every village and fawcets and sewers in every town.

- At 1980 prices this would have cost $25 million a day for every day of the Decade, compared to the $240 million a day the world then spent on cigarettes.

There is no chance of the goal being met but there has been some progress.

Photos (from bottom): J.P. Laffont/Sygma; Oxfam; Mike Goldwater/Network; Mike Goldwater/Network

24

Drawers of water

FOR the vast majority of rural women in Asia, Africa and Latin America, the idea of a home water tap is sheer fantasy. The best they can ever hope for is a hand-pump at a nearby borehole or a tap from a catchment tank or dammed-up spring. And though this 'improved water supply' might be less polluted than the lake or river, for those women who must carry the water, distance is more important than cleanliness.

For wherever it is, they still have to fetch it: still raise to their heads, or backs, or shoulders, those heavy earthenware jars, metal drums, brass pots.

Almost from the first day they walk, small girls go with their mothers and older sisters to the well. The tins balanced on their heads grow bigger as they grow older — starting out no larger than a fruit juice can and ending with the 20-litre pots of their mothers.

Photo: Nick Fogden Oxfam

Carrying water is so much a part of their lives that it is scarcely something to grumble about. It is the distance about which they complain. In some parts of Africa women can spend eight hours a day collecting water. And, as nearby streams and water holes become cakes of dried mud in the dry season, so the distance they must walk lengthens. There is no question of doing without.

In Upper Volta some women leave at dusk to escape the noon-day sun. They sleep overnight at the well and return with the family's water at dawn. If the journey back is uphill it can burn up to 90 per cent of the food they consume each day. This leaves little time and energy for other things. Child-care suffers, babies are starved in the womb, and the continual water-bearing can distort the pelvis of a young girl, adding to the dangers of pregnancy and childbirth.

Dangerous and tiring it may be, but many women are proud of their strength and endurance. Kikuyu women of Kenya, for instance, tend to be scornful of the physical prowess of women elsewhere. 'Kikuyu are much stronger,' they boast. 'Look how much water we carry.' They carry it on their backs, balancing a huge metal drum high on their shoulders and holding it in place with a leather thong looped around their foreheads. To carry the load in this way they must walk half-stooped and bent over, eyes on the ground, one arm steadying the drum. No image could suggest a beast of burden more strongly.

And nothing could be better calculated to destroy the grace and deportment that results from carrying loads on a woman's head. That elegant gliding walk, with all the locomotion in the buttocks, the straight back and long neck, are symbols of womanhood throughout the developing world. And its rhythm and stateliness are hallmarks of the serene attitude to heavy physical labour which is their lot.

But the Kikuyu would laugh at the idea that grace and posture are things to consider. Water is needed for the family. It is a woman's task to fetch it. And if she can carry 25 or 30 kilos from the river at a time, then she must be doing better than her sister whose neck muscles only permit her to carry ten.

Source: *New Internationalist Calendar*, July 1984
By Peter Cullen, Darling Downs Region, Toowoomba

Student Exercises

1. Read the passage, "Drawers of Water", and answer the following questions:
   (a) How do most rural dwellers of Asia, Africa and Latin America obtain their water supplies?
   (b) Who usually does the work of obtaining water?
   (c) What part of this chore do they complain most about? In what ways is this different from the complaints at home about your water supply?
   (d) What image used in the passage suggests a "beast of burden" to the writer? Why?
   (e) What physical and social effects does water carrying have on those whose task it is in the Third World?
   (f) Which two sentences from the passage best sum up its meaning.

2. (a) Convert the table headed, "It Depends on Where you Live", into four bar graphs.
   (b) What do the graphs show concerning the availability of clean water in the Third World?
   (c) Why do you think this is so?

3. Examine the box headed, "A Drop to Drink".
   (a) How much water per person would you expect a family with a single household tap to consume?
   (b) What does the amount of water a family consumes depend on? Do you agree? Why?
   (c) Test this claim by taking readings from your water meter (where possible) at the beginning and the end of one day and calculate your daily consumption. How does it compare to that of a typical family in the United States? Suggest reasons.

4. (a) As a class project construct large display posters on the theme "Water". Topics could include:
   - Two-thirds of our body's weight is water;
   - A person needs about five litres of water each day for cooking and drinking;
   - More than three-quarters of human illness is related to the lack of clean drinking water and sanitation;
   - One quarter of what the world spends each year on alcohol could supply clean water to every community in the world.

   (You should be able to find at least five other topics from the article.)
   (b) Display the posters in a prominent place and monitor the reactions of those who examine them.
   (c) Report these reactions to the rest of the class and discuss them.

Continued on page 96

WATER

Two-thirds of our body's weight and nine-tenths of its volume is water. That is why water is essential for life. People can survive for up to two months without food. But they die within three days without water.

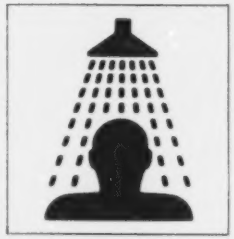
Photo Bernard P. Wolff UNICEF

To fetch and carry

In many places the family's water must be fetched each day by women and children. The most water a woman can carry in comfort is 15 litres – each litre weighing one kilogram.

A typical family with five children needs about 40 litres a day just to survive.

But to keep them all clean and healthy 200 litres of water are needed.



A person needs about five litres of water each day for cooking and drinking.
But the World Bank estimates that a further 25-45 litres are needed for each person to stay clean and healthy.

It depends where you live

Over half the people in the Third World do not have clean water to drink. And three quarters have no sanitation at all. Clean water, vital for life, is also vital for health.

	Water % supplied	Sanitation % supplied
In towns	house connection 57 standpipe 20 nothing 23	house connection 25 other facility 50 nothing 25
In the country	adequate 29 inadequate 71	adequate 15 inadequate 85

Graphic Quaker Peace Service

Photo Campbell UNICEF

More than three quarters of human illness is related to the lack of clean drinking water and sanitation.

Type of facility	Approximate consumption per person
No tap or standpipe	12 litres
Standpipe only	25 litres
Single household tap	47 litres
Several household taps	165 litres

A drop to drink

The amount of water a family consumes depends not on what they need, but on how easily it is obtained. If it must be fetched from a well or river people only consume an average of 12 litres a day. If it is freely available from household taps, people consume a staggering 165 litres each a day – or more.

A typical family of four in the United States consumes about 660 litres of water per day.

The cost of supplying clean water to every community in the world has been estimated at $27 billion a year

- **one quarter of what the world spends each year on alcohol**
- **one third of what we spend on cigarettes**
- **one twentieth of what the world spends each year on arms**

25

The blue revolution

ALONG the Ganges basin in India or on the richly fertile deltas of the Mekong, of China and Java, the land is not green. Instead irrigation has turned it into a jigsaw of blue and brown during the ploughing season, like the surface of some finely crazed blue porcelain bowl. These are the most densely populated agricultural areas in the world; the Ganges basin alone is predicted to hold over half a billion people by the year 2000.

And at this time of year all of those people seem to be out on the land — ankle deep in mud, thigh deep in water — preparing for the new season's crop. The scene looks chaotic: men shout encouragement to huge mud-spattered oxen as they strain to pull ploughs and carts through the heavy, sticky earth; women and children, their rough cotton clothing tucked and folded away from the water, wade through the channels calling to one another with baskets of young seedlings in their arms.

And somehow this water-covered land must be made to feed them all. Because, while restless feet and spades churn up the mud between the blue fields, some magic is being worked below the surface.

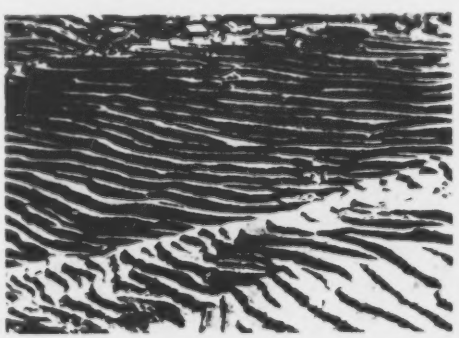


Photo: Claude Sauvageot

The water of the paddy field is like a cloak of protection: it protects the soil against erosion by the sharp bullets of tropical rainstorms; it keeps the temperature of the earth constant; it gently moves oxygen and nutrients around the stems and roots of the young plants. And the water grows a crop of its own: blue-green algae. It works as a sort of free fertiliser, extracting valuable nitrogen from the air and making it available for the crops year after year. Properly cultivated and maintained, a paddy field can go on producing food for centuries because of its crop of algae. And many of the intensely irrigated areas of the world have been doing just that — continuing to provide for massive increases in the population of these areas.

Irrigation can increase the food yields more than any other agricultural improvement by doubling, trebling or even — in some parts of Indonesia — multiplying by a factor of eight, the number of crops that can be grown in one year. The productivity of agricultural land has been increasing by a steady two per cent a year over the last 20 years and more than half of this increase is due to irrigation.

Less loudly heralded than the green revolution, irrigation — the blue revolution — has perhaps an even greater potential for allowing food production to keep pace with population growth.

Today, the unfortunate side effects of the huge irrigation schemes of the world — like the Aswan, Volta and Kariba dam projects — are well known: populations were displaced, benefits tended to go to city-dwellers and a minority of already relatively wealthy farmers, and the incidence of some water-borne diseases like schistosomiasis and malaria reached almost epidemic proportions. But more and more small-scale irrigation projects are now getting under way, with the water coming from a local tubewell and pump rather than via the tributaries of a massive reservoir canal. This gives greater scope for individual communities to maintain their own irrigation systems, keeping them free of the snails, mosquitoes and worms that spread disease and avoiding the dangers of salination and waterlogging that beset many larger schemes.

Source: *New Internationalist Calendar*, January 1984
By Bruce Chadwick, Brisbane College of Advanced Education

Student Exercises

1. Read the passage, "The Blue Revolution", and answer the following questions:
   (a) What does the term "Blue Revolution" refer to?
   (b) Name three of the main countries affected by the "Blue Revolution".
   (c) How does a water sodden field protect the crops that people grow?

2. Describe the role that blue-green algae plays in the growing of crops?

3. (a) What is the "Green Revolution"?
   (b) What does the author mean when she writes that the "Blue Revolution" has been less loudly heralded than the "Green Revolution"?
   (c) Why do you think this is so?

4. List four side effects of other major irrigation projects.

5. Study the information in the box "More Food, Less Land".
   (a) Use the figures in this box to draw a bar graph to show the changes in food yield per person in the four areas.
   (b) Which area(s) will have the largest proportional drop in food yield between 1975 and 2000?
   (c) Which area(s) will experience only a minor change in food yield per person? Why do you think this is the case?

6. In the box "More Irrigation" it states that "Irrigation can allow ... up to 8 crops to be grown" on an area of land each year. Name five of the crops which could be grown on these irrigated lands.

7. Study the photo of the person in the field and the diagrams below it showing the percentage of irrigated land. What continent do you think this photo was taken in? Why?

8. Suggest three possible reasons for differences in the percentage of irrigation in the four groups of countries.

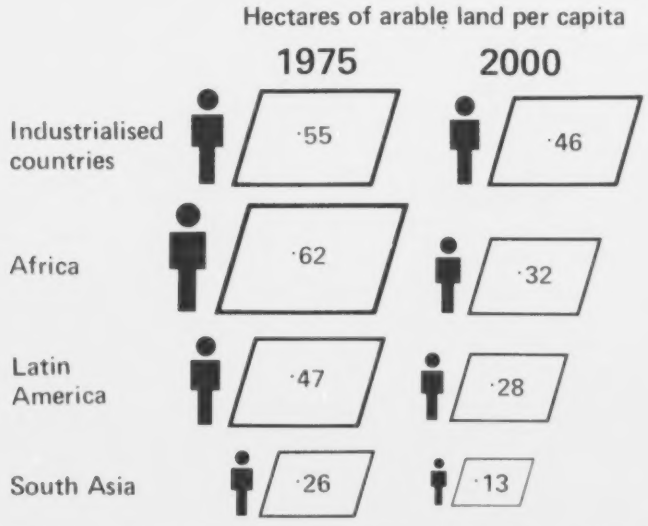
9. (a) Why do you think Africa has struggled to make only 3% of its land irrigated?
   (b) In what way does the topography of Asia make it easier to control water than in Africa?

Continued on page 97

IRRIGATION

MORE FOOD, LESS LAND

Although food production is expected to double between 1970 and 2000 the amount of arable land being cultivated will only increase by four per cent. As population grows this means less land per person.



In the early 1970s one hectare of arable land supported two and a half people, by 2000 one hectare will have to yield enough food for four people.

MORE IRRIGATION

Up to 60% of increases in agricultural output in the past 20 years has come from newly irrigated areas.
Irrigation can allow two, three, or even — in some parts of Indonesia — up to eight crops to be grown successively on the same patch of land in one year. This can turn an inadequate plot into a thriving farm feeding the whole family

Nearly one eighth of all the world's agricultural land – 230 million hectares – is under irrigation. An additional 50 million hectares are expected to be added to this total by 1990.

Source: Global 2000 Report

26

Walls of water

SO long as the sun and moon are there' was the old Sinhalese way of saying that the land and works of the village would always be there. Life in a village of Sri Lanka's dry zone revolved around three vital elements: the *dagoba* (temple), the *ketha* (padi-field) and the *wewa* (water tank). The irrigation tanks could be found in the jungle, in the mountains and in the villages, and they were so important that *wewa* came to be synonymous with the word for village.

There were many different kinds of *wewa*. There was the forest tank, for instance, which was built not for irrigation but to provide water for animals and stop them wandering into the padi fields in search of a drink. Then there was the erosion control tank or *pota wetiye* which was designed to catch silt before it entered the two main water storage tanks.

This was an irrigation system that worked well for hundreds, even thousands of years. The great ancient capitals of Anuradhapura and Pollonaruwa rose and fell. Kings built huge water tanks for ornamental purposes that augmented their status but silted up and became grand, useless follies. But the village irrigation system went on undisturbed, ever renewing itself – in harmony with the earth and the people.

In the nineteenth century the British came. Much of the land was confiscated and sold off in five-acre plots. This has since made collective maintenance of the irrigation channels much more difficult – just as it has promoted factionalism and divisiveness. Now there are chronic water shortages and land that once gave two crops a year now only yields one.

When the British finally departed they left behind them a society with new aspirations, one that quite rightly wanted to take its place in the modern world, with equal access to its industrial wonders, its electricity. A new vision of irrigation was dreamed up. The old *wewa* system was primitive, they said. What we need is a dam project that will block the Mahaweli River and provide water for our fields and electricity for our factories. The British Government funded one of these, the Victoria Dam, out of its foreign aid budget and proclaimed its pride in this prestige project. Prince Charles and Princess Diana came to visit. President Jayewardene staked his political future on its success.

So the devastation began. The Mahaweli project will require over a million people to be moved – one sixteenth of Sri Lanka's population. Resettled families will get just 3,000 rupees ($110) plus one hectare of forest in compensation. The cost has soared from 1,250 million dollars to 2,800 million dollars, strangling Sri Lanka's economy with debt repayments.

And as the cost mounts, so does the evidence against large dams. There is no chance that the Mahaweli dams will outlive the *wewa* – let alone the sun and moon.

All material from **The Social and Environmental Effects of Large Dams** *by Edward Goldsmith and Nicholas Hildyard (Wadebridge Ecological Centre).*

Source: *New Internationalist Calendar*, April 1988
By Nick Hutchinson, Pittwater High School, Sydney

Student Exercises

1. Read the passage, "Walls of Water", and answer the following questions:
   (a) Why did life in Sri Lanka's dry zone revolve around the three vital elements of the dagoba, ketha and wewa?
   (b) Explain why two different types of wewa were built?
   (c) What was the difference in terms of effectiveness between local irrigation systems and the grand designs by Sinhralese royalty?
   (d) What changes did the British make in the 19th Century and what was the result of their intervention?
   (e) Describe the effects of the Mahaweli Projects.

2. Why do you think the authors pick on Sri Lanka as an example of old and new irrigation projects?

3. What do the authors think about the "colonial system"?

4. Study the large diagram called "Big Dam Projects".
   (a) On a copy of a world map locate the large dam projects and label each project using the most important ideas expressed in the passage.
   (b) List some of the nasty side effects of large dam projects.

5. (a) What are some of the health risks connected with large bodies of standing water?
   (b) Silting used to be very beneficial for many irrigation farmers. How have the large dam schemes deprived irrigation farmers of fertile silt?
   (c) How viable are the alternatives to this clean way of producing electricity?
   (d) Why has soil salting (salinisation) increased globally?

6. Why were the people of the Philippines so united in their opposition to the Chico project? To what lengths would they go to try to stop this silence?

7. Do you think the information is biased against the builders of big dams? How might supporters of big dams present their arguments?

8. Here is a list of possible research projects on big dam schemes:
   (a) Investigate the advantages and disadvantages of large dam projects in Australia.
   (b) What were some of the benefits envisaged by the planners of the Snowy Mt Scheme in the 1950s?

Continued on page 97

BIG DAM PROJECTS

The building of large dams often forms a major part of a Third World country's development plans. This is encouraged by the World Bank, 38 per cent of whose agricultural development loans have been for irrigation projects. Both donors and local politicians are enthusiastic about dams because:

- They are prestigious
- They supply electricity (hydro-electric power) in a way that does not make the country dependent on expensive oil imports
- They allow extensive irrigation systems which can produce more food

But large dams also cause great damage – damage which far outweighs their benefits.

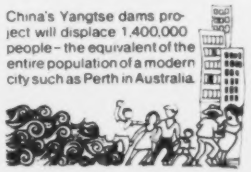
Dams can be big

● Some huge reservoirs produced by dam projects since 1945 are the only human-made things visible from outer space.

The Aswan Dam in Egypt is 17 times heavier than the Great Pyramid of Cheops.

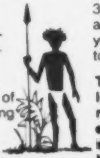
The Volta Reservoir takes up five per cent of Ghana's land area and is about the size of Lebanon.

China's Yangtse dams project will displace 1,400,000 people – the equivalent of the entire population of a modern city such as Perth in Australia.



Nasty side-effects

Reservoirs flood large areas of land, destroying the culture and health of indigenous peoples.



● In Brazil, eight planned hydro-electric projects are expected to flood between 91,000 and 351,000 hectares of Indian lands, threatening the livelihood of 34 indigenous tribes.

The flood engulfs forests and previously fertile land.

● Between 1950 and 1975 India lost 479,000 hectares of forest land to dam projects. The Srisailam project alone flooded 43,000 hectares of farmland which had provided a livelihood for 100,000 people.

Fertility is lost as over-irrigated land becomes a salty desert.

● At least 50 per cent of the world's irrigated land now suffers from salinization. Between 200,000 and 300,000 hectares of irrigated land are taken out of production every year because the earth has become too salty.

The health of people in all irrigated areas, not just in the region of the reservoir, is threatened by waterborne diseases such as schistosomiasis and river blindness as well as malarial mosquitoes which breed in swampy conditions.

● The building of the Aswan Low Dam in Egypt caused local schistosomiasis rates to rise from 21 per cent to 75 per cent.

Those who benefit from a dam – from its electricity and the export crops fed by its irrigation – tend to be urban elites and multinational corporations rather than the poor.

● Iran's Dez Dam was supposed to provide 80,000 hectares of irrigated land to small farmers in Khuzestan. Instead almost all the land went to foreign-run, intensive plantations producing crops for export. The scheme displaced 17,000 peasants.

Silting – the accumulation of earth carried into reservoirs by rivers – means that reservoirs in tropical climates can very quickly become clogged and useless.

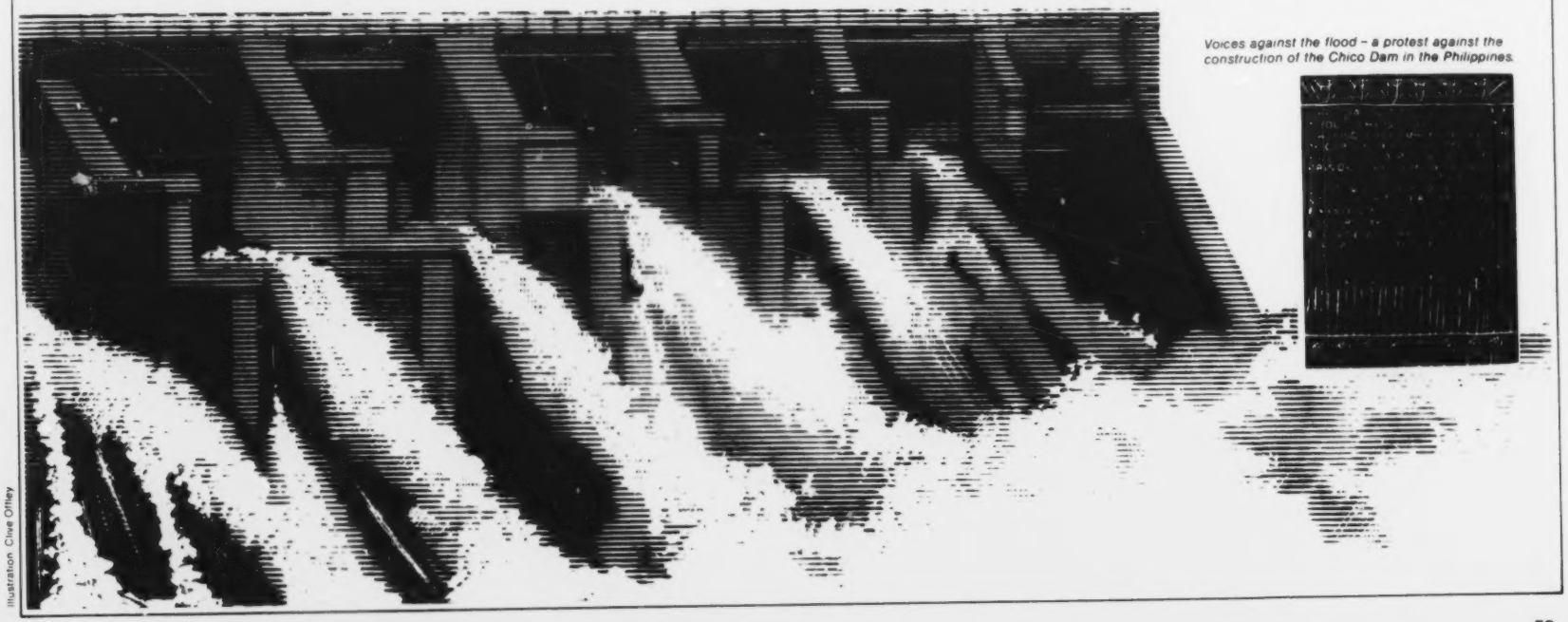
● In China, the Sanmenxia Reservoir was completed in 1960 but had to be abandoned in 1964 due to premature siltation. The Laoying Reservoir actually silted up before its dam was completed.

Where do we go from here?

Dams have until now been considered a clean way of producing electricity. But we are only now realizing the enormous damage they cause. The way forward lies in research into wind and wave power for temperate countries, and solar power for tropical countries.

Irrigation is now considered essential to increase food production. But it is counter-productive if rising salt levels make the earth unusable by future generations. Irrigation schemes must at least take into account the need for drainage.

In the meantime, the bigger dams are, the more problems they cause. We should stop building large dams for the sake of prestige and concentrate on small, manageable projects where the environmental damage can be limited.



Voices against the flood – a protest against the construction of the Chico Dam in the Philippines.

Illustration Clive Offley

27

Mustafa and his donkey

LET me tell you about Mustafa. He's an energetic young lad, offspring of Fawzi Abu Hamad and his wife Fatima and eldest son in the family; his parents have pinned a lot of hopes on him. Although only twelve he has left school and works in the family's three fields surrounded by irrigation ditches. He rides their family donkey proudly through the village every morning, on his way to work on the shadouf – a system for lifting water into the fields that's changed little since the Pharaohs.

Later in the day, the temperatures rise to 40-45 degrees centigrade in his part of Upper Egypt. Mustafa plods back through the shimmering heat haze, driven indoors till the late afternoon. His father gives him a languid wave from the shade of the tea shop. He and his cronies have been there most of the morning, sitting over glasses of tea and a hookah. Perhaps they look lazy, but in reality they lack energy and feel unwell. Maybe the bilharzia contributes to this lassitude, and to the lines in his face which makes him look sixty when he's scarcely forty. Most of the older villagers have the disease. Not an outright killer, the schistosomiasis worms which cause the bilharzia disease work inside the body, undermining strength and bringing early vulnerability to disease and death.

And sadly, the Aswan High Dam – once the subject of innumerable excited conversations within the mud walls of the tea shop – has spread the disease far and wide along the Nile valley. With the dam have come further irrigation canals reaching green fingers out into the desert to coax new crops from the once-parched soil. Yet they also harbour the very snails which are the temporary home of the schistosome worm. The snails breed and multiply in stagnant water. And every time Fawzi and other bilharzia victims of the village use the ditches and drains as latrines, they send the parasitic worm back to reinfect the water.

Of course the villagers could be treated. And bilharzia can be cured if caught in its early stages. Theoretically all Egyptians have access to a health care service. But the practice is rather different. The local clinic opens only irregularly. Everyone knows that the doctor from Luxor,while pocketing the government fee for running the clinic, begrudges the long car journey. And many other doctors simply take their skills elsewhere – to the Gulf oil states, for instance, where they are making ten times his salary. He feels he's got better things to do than cater to ignorant fellahin (peasants) who have more belief in Allah than in his drugs. At least he has electric fans in his private practice in the city, to ease the stinking heat. So his crumpled safari suit is seen less and less often under the little zinc-roofed dispensary in Mustafa's village. Instead he can be found gazing at a new Peugeot 504 on the forecourt of the city garage. Maybe soon he can afford the downpayment. . .

As evening draws in,the sun's muted rays are reflected in gold and orange from the earth walls of the village houses. Mustafa, astride his donkey, trots back to his fields.He is determined to harvest a bumper crop of peppers for the family with the help of that precious flow of water from the elaborate system of ditches and drains. Once again water will trickle around his bare feet, a life giver and a life taker.

Source: *New Internationalist Calendar*, May 1985
By Brian Maye, Armidale College of Advanced Education, Armidale

Student Exercises

1. Read the story, "Mustafa and his Donkey", and answer the following questions:
   (a) Where does Mustafa live, and what is the environment like there?
   (b) Write a brief description of Mustafa which would enable someone visiting his village to enquire after him and to identify him. For example: name, age, appearace, who his parents are, what he usually does, how he feels about these things, where he usually goes, where he was last seen, and so on.
   (c) Why might Mustafa's father and his friends seem "lazy" to an outsider? What has caused this situation?
   (d) Why do you think Mustafa's parents "... have pinned a lot of hopes on him"?

2. Find a picture in another book or encyclopaedia of a "Shadouf"? What does Mustafa's use of this device, and of his own hands and a donkey to do work, tell us about the wealth of the village he lives in?

3. In the story and in the information under the photograph of the diesel pump, there is a suggestion that modern irrigation methods have brought benefits as well as problems to areas such as those in which Mustafa lives. List some of the benefits and the way they help people. Also list some of the problems which go with using these methods.

4. (a) Draw your own diagram entitled, "Mustafa's Life Cycle". Start with his parents and his birth, and go through the main things which have happened in his life so far. Then look ahead to what you think will be the main things that will probably happen during the rest of his life.
   (b) For each stage draw a small picture and write some brief comments beside it on what you expect his state of health and level of wealth to be.
   (c) Under your diagram briefly explain how Mustafa's state of health and level of wealth are likely to be related. Comment on the extent to which you expect either might improve.

5. The Aswan High Dam is a very large engineering project. Find out how it was built and what its main uses are?

6. How has the building of the Aswan High Dam caused the spread of bilharzia?

7. (a) Write a list of the things the doctor is dissatisfied about. When you have finished the list, write **M** in front of those things which are related to money, **E** in front of those things which are related to the environment he works in and **A** in front of those which relate to the village people and their beliefs.

Continued on page 98

SCHISTOSOMIASIS

a water-borne disease also known as Bilharzia

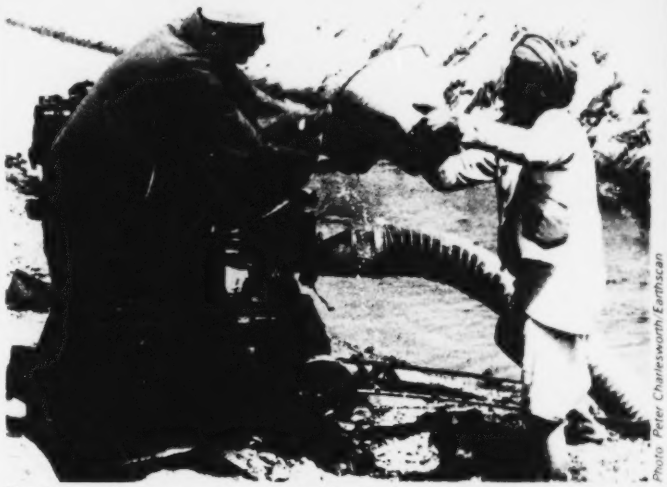
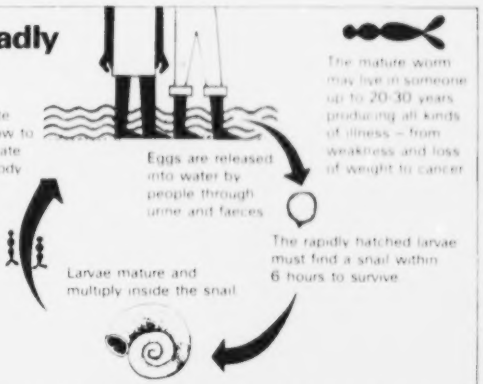


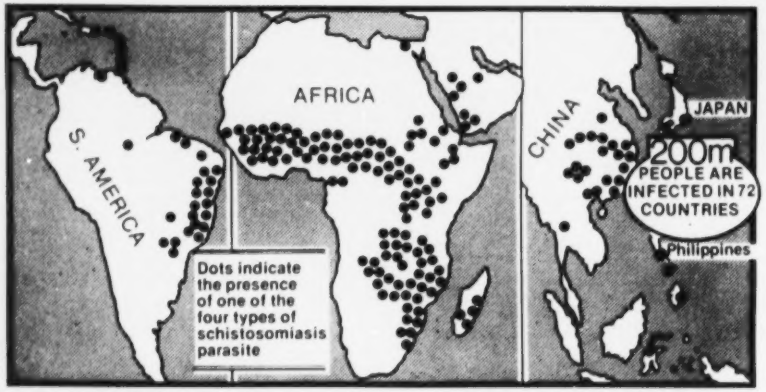
Photo Peter Charlesworth Earthscan

Diesel powered water pumps have extended Egypt's irrigated land and increased crop production. The costs include inflated import bills for fuel and the rapid spread of schistosomiasis among the farmers.

The deadly cycle


Worms penetrate human skin, grow to maturity then mate in the human body
Eggs are released into water by people through urine and faeces
The mature worm may live in someone up to 20-30 years, producing all kinds of illness – from weakness and loss of weight to cancer
The rapidly hatched larvae must find a snail within 6 hours to survive
Larvae mature and multiply inside the snail
Worms emerge after 3-7 weeks looking for humans

The schistosome needs both a person and a specific kind of snail as its host at different stages in its development. It likes shallow, slow moving water.



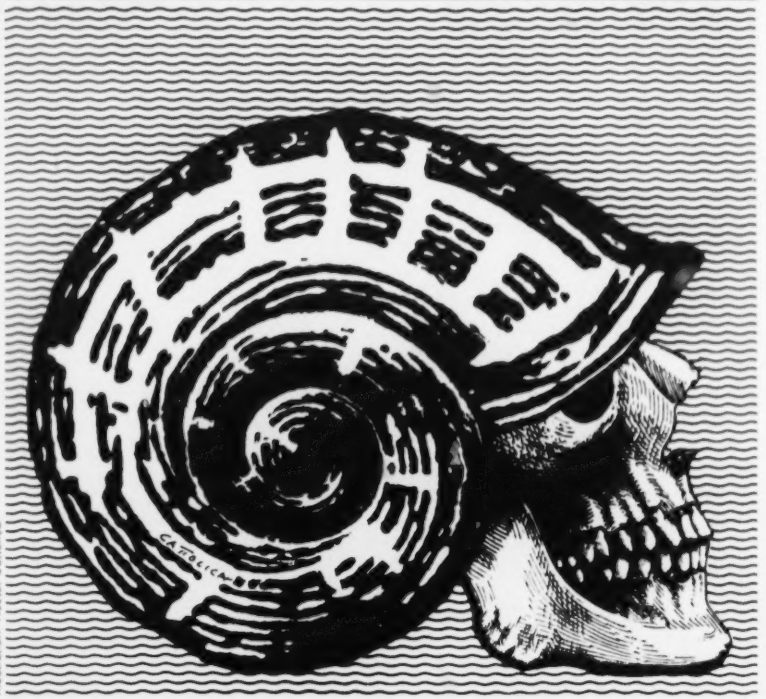
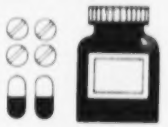


Illustration Hector Cattolica

Breaking the cycle

IN MAN



by health education and drug treatment for those infected

IN SNAILS

by physically removing them or killing them chemically or by biological competitors.

IN THE ENVIRONMENT

by better sanitation improving water supplies and destroying likely breeding grounds for snails.
A combination of methods works best.

28

Life on the brink

PAPER and tin cans litter the sides of the ravine. Old refrigerators, car doors stick out here and there. Now and again a landslide pours another small cascade of earth towards the murky stream at the bottom.

At the top, perched along the edge in this precarious corner of Guatemala City, are shacks of cardboard and corrugated iron. The city is criss-crossed by ravines, the *barrancas*, and the land along the brink of this network offer some of the few housing sites that the poor can afford.

'You get used to it,' says Juan Garcia. 'It's a dangerous place to live, but you get used to it.' He watches the children, surefooted as cats, racing down the steep slopes hopping from one rock to another – an adventure playground on a grand scale.

Juan lives here with his wife Olivia, their six month old daughter, and Olivia's younger brother. Juan is 24 years old and had six years at school. Now he must pick a living as he can from what the city offers.

'Up to last week I was loading trucks. But I'd really like to be a mechanic.' With little hope of a steady income they have no choice but to live in the *barrancas*.

When the earth shakes, when the city shakes, dozens of houses can be sent crashing to the bottom of the ravine. 'Before the last big earthquake there was a whole row of houses over there on the other side. Now there are hardly any. Everyone was asleep when it happened and entire families disappeared down the slope. Two or three days later the corpses had to be taken out and burned.'

'I was living with my parents then,' says Olivia. 'We had a house further away from the edge. But my leg was broken when the roof came down.'

Some 22,000 people died in Guatemala in 1976. And they were mostly the poor: those living in the *barrancas* in the city or in mud-walled *adobe* houses in the countryside.

The rich houses in the cool tree-lined surburbs of the city were shaken just as vigorously. But they had the strength and the construction to withstand earthquakes – so most of the houses, and most of their occupants survived.

Olivia does what she can to keep the house clean. There is a simple table, a bed, two or three religious pictures and a crucifix. A shallow channel has been scooped out of the mud floor to take the water away when it rains. 'And when it does rain,' says Olivia, 'with the drops banging on the tin roof, the older children, those who remember the earthquake, get frightened.'

Geovanni, Olivia's ten year old brother, is living with them at present, and clambers up the slope and into the back of the house. He's come to collect the wooden box and tins of polish that he uses as a shoe-shine boy. Geovanni is bringing the only regular income into the house – about a dollar a day.

But Juan is hopeful. 'I've heard there might be a job on the other side of the city – painting cars. Maybe I'll be lucky.'

If they are really lucky none of them will be there when the next earthquake strikes.

Source: *New Internationalist Calendar*, November 1986
By Mark Manuel, Grant High School, Mount Gambier, South Australia

Student Exercises

1. Read the passage "Life on the Brink", and answer the following questions:
   (a) What are the hazards of living in Guatemala City? Why does the author say that the area resembles a "garbage dump"?
   (b) What do the terms "barrancas" and "adobe" refer to?
   (c) Considering the hazards, why do people continue to live in the areas described?
   (d) How does living in the "rich houses" compare with life in the barrancas?
   (e) Describe the living conditions in the home.
   (f) Write a description of the living areas inside your home?
2. Imagine you are a local newspaper reporter on assignment in Guatemala City after an earthquake.
   (a) Write a brief report of the disaster.
   (b) How and where might your report of the disaster be written up in an Australian newspaper. Why?
3. What is the meaning of the last sentence of the passage: "If they are really lucky none of them will be there when the next earthquake strikes."
4. Of all the hazards mentioned in the diagram which are the most predictable? Give reasons for your answer.
5. Which disasters occur most regularly? What is the suggested cause of the increase over the past decades?
6. Which disaster shows the largest increase in frequency in the 1980s?
7. Rank the disasters from largest to smallest from the diagram on human cost. Draw a bar or column graph showing the effects of the ranked disasters. Give the graph an appropriate title.
8. Which hazards pose the greatest threat to the existence of the world? Explain your answer?
9. Why do developed countries cope better with disasters than Third World countries?
10. With each of the hazards mentioned, how have people intensified the potential for disaster?

Continued on page 98

The fragile earth

The hazards may be natural – but humans decide who will suffer from them.

Droughts

Droughts are unavoidable. But local ecology and local politics help determine just how severe an impact any drought will have. Deforestation and over-cultivation remove valuable topsoil – so the rain that does fall will quickly run off or evaporate. And it is the politicians nationally and internationally who decide how the burden of a drought should be shared.

Earthquakes

These are among the least understood and least predictable of natural hazards – insurance contracts still classify earthquakes as 'Acts of God'. But the impact of a tremor is more predictable. An earthquake of the same force will kill many more people in Central America than it will in Japan – or in any one of the richer countries where building regulations are more strictly enforced.

Cyclones

Cyclones – also called hurricanes or typhoons – are intense tropical storms which start out at sea. Coastal communities suffer the bulk of the impact; such storms lose their force when they start to travel over land. A warning of up to 24 hours is usually possible but Third World governments often find it difficult to get the message through fast enough to people who will be in the path of the cyclone.

Photo Mark Edwards/Earthscan

Tidal waves

These are caused not by tides, but by land slippages under the sea or volcanoes on dry land. The massive movements of water that result can have a crushing impact when they reach the coast. Coral reefs and sand dunes help absorb the impact – so removing them to build housing or factories by the sea increases the danger. Fortunately the arrival time of the waves can usually be predicted very accurately.

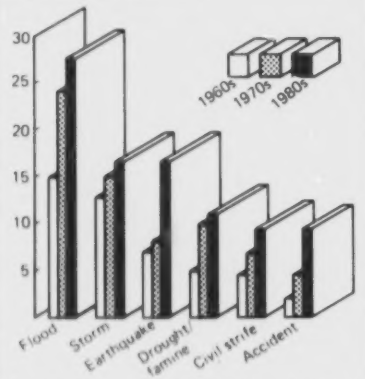
Volcanoes

Volcanoes may be spectacular but have so far been responsible for relatively few deaths. And scientifically accurate predictions of eruptions should help keep the death toll low in future. The risks do increase, however, as more people settle round volcanoes to take advantage of the rich volcanic soil.

Floods

The increase in flooding in developing countries in recent years is almost all due to deforestation. Trees and soil act as a 'sponge' which can soak up intense rainfall. But as forests disappear high up in the Himalayas or the Andes so there is little to stop the water rushing down to the coastal plains – and washing away whole communities.

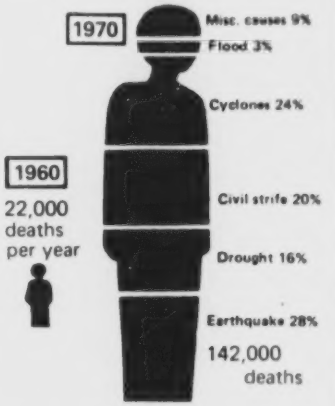
Disastrous decades



The chart shows the average number of events causing large-scale loss of life and property each year. The number has gone up each decade not because of changes in the weather but because human beings have made the earth – and themselves – more vulnerable to natural events.

The human cost

The death toll per disaster increased more than six times between 1960 and 1970.



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Shifting sands

AROUND the margins of the parched, unyielding deserts of the world lie huge stretches of arid and semi-arid land. This is fragile land — with barely enough rain to settle the dust, barely enough good soil to nourish the grass, barely enough trees to tame the drying desert winds. Fragile land needs delicate handling. Any disturbance in the ecological balance will turn the margins into wastelands too.

For centuries nomadic pastoralists — sheep, goat, camel and cattle herders — have kept their promise to the arid land. They moved their herds carefully across the land, following the rain, leaving behind enough grass cropped short and fertilised by their animals' dung to grow strong and green after next year's rains. Arriving at farming settlements near the river banks they stopped to trade: in return for meat, milk and salt they received grain and lentils — and permission to graze their herds on pastures lying fallow between crops.

Farmers and nomads together worked out a system that allowed them — and the land — to survive. Today that traditional system is breaking down and half of all the arid and semi-arid lands — that is one sixth of all the land in the world — is poised to become desert.

The flood plains surrounding the Tigris and Euphrates, for example,once supported over 20 million people and were known as the 'Fertile Crescent'. Today they can only provide for ten million. Nearly a third of the land is unusable and abandoned. The rest is so depleted that crop yields here are the lowest in the world. At the same time the region now contains one million sheep — four times the maximum number that can be sustained without threatening the pasturelands' future.

Here, as in other parts of the world, the nomadic herdsmen have been blamed for the destruction of these frail arid lands. True, too much grazing by too many animals does help transform good land into dust. But by increasing their herds and changing their grazing patterns nomads are simply adapting in the only way they know to pressures outside their control.

In 1950 a camel-load of salt could be exchanged for 20 loads of millet. Today that same load of salt buys only one or two loads of grain. With the value of their animals dropping, a nomad family has no option but to increase the herd size to keep pace with the cost of living.

The number of animals roaming the land increases, but the land available to them for grazing has decreased because overcultivation of cash crops has exhausted the land, forcing farmers to bring more and more hectares under the hoe. What was good for the land, for subsistance farmers and the nomads was not what today's governments or yesterday's colonial rulers wanted. Colonialists wanted cotton and other cash crops like peanuts for their populations at home. And today's governments, who inherited an economy and style of agriculture based on export of these crops, now see the nomads' growing herds as a threat to their countries' prosperity.

But the nomads' wealth depends on their animals in more ways than one. The whole culture revolves around them: a herd represents a history, a monument and an obituary for its owners. The animals, given away with brides and exchanged to forge alliances between families, represent a living record of all the major social events. And the encroaching deserts threaten this, the nomads' way of life, as well as their livelihood.

Source: *New Internationalist Calendar*, December 1984

By Darren Lawrance, Brisbane CAE; and Christine Dunbar, Kogarah Marist High School, Sydney

Student Exercises

1. Read the passage, "Shifting Sands", and answer the following questions:
   (a) "Desertification occurs not in deserts themselves but ..." where? Why?
   (b) In the past, nomadic pastoralists and farmers "worked out a system that enabled them - and the land - to survive". Explain this system in a few sentences.
   (c) Explain what has happened to the "Fertile Crescent".
   (d) Draw a diagram which explains how overuse of the land causes desertification.

2. (a) Imaging you are a present-day nomad. Write a paragraph explaining why you are increasing the size of your herd, even though you know it will damage the land. Describe your feelings toward past colonial rulers and toward your country's present government.
   (b) Discuss your answer in small groups and write a play based on your ideas.

3. (a) Do you think the author is biased in favour of the nomads? Why?
   (b) Does he adequately consider the government's points of view regarding cash crops and the nomads' activities? Why?
   (c) How can these conflicting views be resolved?
   (d) How effective are the written and graphic techniques used in the resources in getting messages across? Explain, using examples of each.
   (e) Which part of the resources communicates best to you (e.g. the passage, the map, the table, etc.)? Why?

4. Do you think the nomads, colonial rulers or present governments are to blame for the problems of desertification, or are they all to blame? Support your argument.

5. (a) How much of the earth's surface is threatened with desertification?
   (b) How many people live in these areas?
   (c) In which parts of the world has there been severe desertification?

6. Using the table of "Land threatened by severe desertification", draw a bar graph to show how much land is threatened in each region of the world.

7. How have China and India reclaimed desert areas?

8. Work in a group of four students as government agricultural advisors in a poor country with a severe desertification problem. Draw up a plan of action for halting desertification and reclaiming desert areas. Be sure to consider the well-being of all groups (including nomads and cash crop farmers) and your nation's economy.

Continued on page 99

FRAGILE ENVIRONMENTS

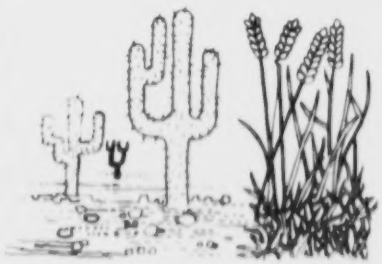
Photo: Mark Edwards

Desertification occurs not in deserts themselves but in the arid and semi-arid lands nearby. These lands comprise one third of the earth's surface where one seventh of the human family lives.

More than half of these fragile arid and semi-arid lands and the 80 million people living there are threatened with desertification.

The sands of time . . .

Every year about a fifth of a million hectares – an area the size of Senegal – become desert



Land threatened by severe desertification

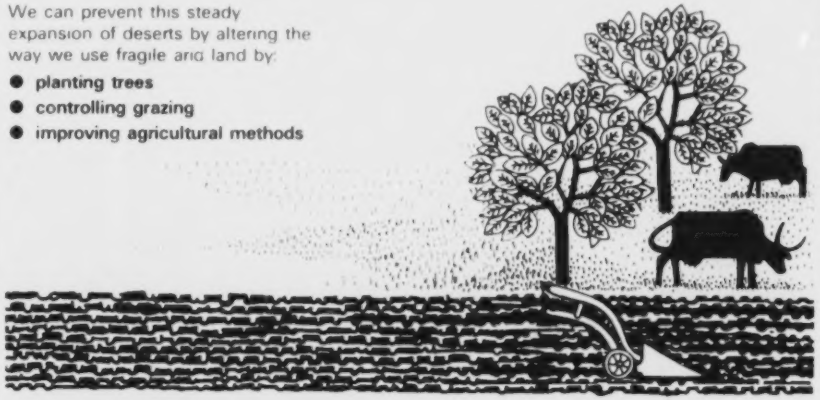
	square kilometres
US, Canada, Mexico	10.5 millions
South America	7.0 millions
South Saharan Africa	6.9 millions
Mediterranean region	1.3 millions
India and Pakistan	1.7 millions
Australia, West Asia and China	2.6 millions

. . . and how to turn them back.

Fragile arid land is turned into unyielding desert by human beings overcultivating it, cutting down its trees, allowing too many of their animals to graze on it, upsetting its balance of salts and minerals with badly-run irrigation schemes.

We can prevent this steady expansion of deserts by altering the way we use fragile arid land by:

- **planting trees**
- **controlling grazing**
- **improving agricultural methods**



China has reclaimed large sand-dune areas by planting trees, moving sand and adding river-borne mud.
India is reclaiming 10,000 hectares of desert each year by preventing grazing and planting trees and grasses.

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The land is sacred

THE Great Chief in Washington sends word that he wishes to buy our land. The Great Chief also sends us words of friendship and good will. This is kind of him, since we know he has little need of our friendship in return. But we will consider your offer. For we know that if we do not sell, the white man may come with guns and take our land.

How can you buy or sell the sky, the warmth of the land? The idea is strange to us. If we do not own the freshness of the air and the sparkle of the water, how can you buy them?

Every part of this earth is sacred to my people. Every shining pine needle, every sandy shore, every mist in the dark woods, every clearing and humming insect is holy in the memory and experience of my people. The sap which courses through the trees carries the memories of the red man . . . this land is sacred to us.

This shining water that moves in the streams and rivers is not just water but the blood of our ancestors. If we sell you land, you must remember that it is sacred, and you must teach your children that it is sacred, and that each ghostly reflection in the clear water of the lakes tells of events and memories in the life of my people. The water's murmur is the voice of my father's father.

I do not know. Our ways are different from your ways. The sight of your cities pains the eyes of the red man. But perhaps it is because the red man is a savage and does not understand.

There is no quiet place in the white man's cities. No place to hear the unfurling of leaves in spring or the rustle of insect's wings. But perhaps it is because I am a savage and do not understand. The clatter only seems to insult the ears. And what is there to life if a man cannot hear the lonely cry of the whippoorwill or the arguments of the frogs around a pond at night? I am a red man and do not understand. The Indian prefers the soft sound of the wind darting over the face of a pond, the smell of the wind itself, cleansed by a midday rain, or scented with the pinon pine.

The air is precious to the red man, for all things share the same breath – the beast, the tree, the man, they all share the same breath. The white man does not seem to notice the air he breathes. Like a man dying for many days, he is numb to the stench. But if we sell our land, you must keep it apart and sacred as a place where even the white man can go to taste the wind that is sweetened by the meadow's flowers . . .

Even the white man, whose God walks and talks with him as friend to friend, cannot be exempt from the common destiny. We may be brothers after all: we shall see. One thing we know, which the white man may one day discover – our God is the same God. You may think now that you own Him as you wish to own our land, but you cannot. He is the God of man, and His compassion is equal for the red man and the white. This earth is precious to Him and to harm the earth is to heap contempt on its Creator. The whites too shall pass; perhaps sooner than all other tribes. Continue to contaminate your bed, and you will one night suffocate in your own waste.

Excerpts from a letter by Chief Seattle to the US President in 1855, quoted by William Arrowsmith.

Source: *New Internationalist Calendar*, October 1988
By Jenny Ryan, Brisbane College of Advanced Education

Student Exercises

1. Study the passage, "The Land is Sacred", and answer the following questions:
   (a) Who do you think the "Great Chief of Washington" is?
   (b) What kind of lifestyle did Chief Seattle and his tribe have?
   (c) When was this article written? What is the significance of this?
   (d) What are some of the features of the land that the Chief finds so important?
   (e) In two sentences, write down the main message of the passage.
   (f) How similar is the story of the "white man" invading "the sacred land" and today's story of humans imposing their impact on the rainforests, bushland and other locations?

2. Explain why you think the title, "The Land is Sacred", is appropriate (or not) for this article.

3. What do you think the Chief meant when he said, "The sight of your cities pains the eyes of the red man"?

4. Do you feel that Chief Seattle and his tribes had a choice about white people taking over their land? Explain your answer.

5. Study the large diagram called "Poisoned Air".
   (a) Study the drawing of the man on a bicycle. What do you think the cartoonist is trying to express to the reader?
   (b) Do you think the cartoon is over-dramatised? Why?

6. List some of the chemicals that are causing damage to our environment.

7. What are the effects of these chemicals?

8. (a) Draw a bar graph of the twelve largest polluters in the world in terms of sulphur dioxide emissions.
   (d) What causes most sulphur dioxide pollution?
   (c) What does "domestic", "foreign" and "undecided" mean in the "Dirty Dozen" table?

9. The two columns on the left side of the large diagram list five effects of air pollution: Tree damage, Food losses, Crumbling shrines, Increasing fatalities and Radiation hazards.
   (a) Which one of these presents the most serious threat to the environment?
   (b) Explain your answer in a short paragraph.
   (c) Which one of these at present is the most serious threat to Australia?

Continued on page 99

POISONED AIR

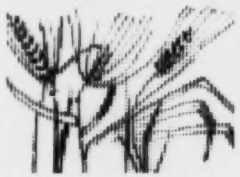
Our air and groundwater are fouled by the burning of fossil fuels in electricity generating stations, in cars, factories and homes. Sulphur dioxide and nitrogen oxide are released into the atmosphere to be washed back down in rain – with nasty consequences for the environment. And nuclear-powered energy is no alternative as the Chernobyl and Three Mile Island accidents have demonstrated. Ultimately we must use less energy to save our nature and ourselves.

TREE DAMAGE

Many forests in Europe and North America are dying from rain with the acidity of lemon juice. More than half West Germany's trees are affected.

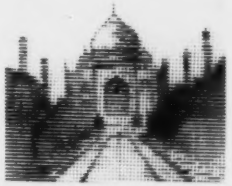
FOOD LOSSES

Acidification of the soil means crop yields are reduced by 10 – 20% in Europe – an estimated loss of $500 million a year.



CRUMBLING SHRINES

Filthy air is threatening the world's most wonderful buildings: the Acropolis in Athens, St Paul's in London and Chartres cathedral are dissolving. Smoke from an oil refinery burn-off near the Taj Majal, India, is likely to turn the delicate marble of the Taj to gypsum within the next 50 years.



INCREASING FATALITIES

Millions suffer from smog in cities. More than 51,000 Americans died as a result of the polluted air in 1982, according to a US Congress Report. Cerebral lead poisoning threatens the children of traffic-clogged cities like Bangkok, Manila and Mexico City, where there is twice as much lead in gasoline as in the West.

RADIATION HAZARDS

Leaks from nuclear power plants endanger millions. 'Chernobyl', in April 1986, where a thermo-nuclear explosion blew off the roof of the reactor, could cause anything between 5,000 and 50,000 cancer victims in Europe over the next 40 years. Further accidents in one of the world's 340 nuclear power plants are likely to happen once every decade. There have been two in the last seven years!

CUBATAO, near Sao Paulo, Brazil, is one of the most polluted industrial centres on earth. Its air contains twice the level of industrial particles considered lethal by the World Health Organization. Fish die in its polluted waters, trees turn to skeletons and more babies are born deformed here than anywhere else in Latin America. A 1982 industry report believed Brazil must 'choose between pollution and recession'. Unfortunately, they've got both.

SUDBURY, in Ontario, Canada has the largest single source of artificial sulphur dioxide effluence in the world with its copper and nickel smelter. The annual output of 632,000 tonnes means that the nickel smelter has discharged more SO_2 between 1969 and 1979 than all the volcanoes in the history of the earth.

BRITAIN'S CENTRAL ELECTRICITY GENERATING BOARD is the largest single emitter of sulphur in Europe – its oil and coal-fired stations lacking any effective anti-pollutant controls. They are responsible for 2.6 million tons of sulphur, most of it blown away to fall on Scandinavia and Central Europe.

THE DIRTY DOZEN

Annual sulphur dioxide emissions in selected countries, 1980. There are three links in the acid pollution chain: emission, transportation and deposition. Prevailing winds can mean that the polluting nation need not suffer the full consequences, acids and oxides staying in the air for hundreds of miles. Thus half the Canadian sulphur deposition comes from the US whilst 63% of Norwegian acid pollution comes from the UK.

LARGEST AIR POLLUTERS

		Sulphur deposition (%)		
TWELVE LARGEST (World)	SO_2 emissions ('000 tonnes)	FOREIGN	DOMESTIC	UNDECIDED
USSR	25,000	32	53	15
United States	24,100	–	–	–
China	12,000	–	–	–
United Kingdom	4,680	12	79	9
Canada	4,516	50	50	–
East Germany	4,000	32	65	3
Italy	3,800	22	70	8
France	3,270	34	52	14
West Germany	3,200	45	48	7
Czechoslovakia	3,000	56	37	7
Yugoslavia	3,000	41	51	8
Poland	2,755	52	42	6
OTHERS				
Hungary	1,633	52	42	4
Finland	595	55	26	19
Sweden	496	58	18	24
Norway	137	63	8	29
Mount St Helens (1980 – 81)	300			
TOTAL (World)	Approx. 100 million tonnes			

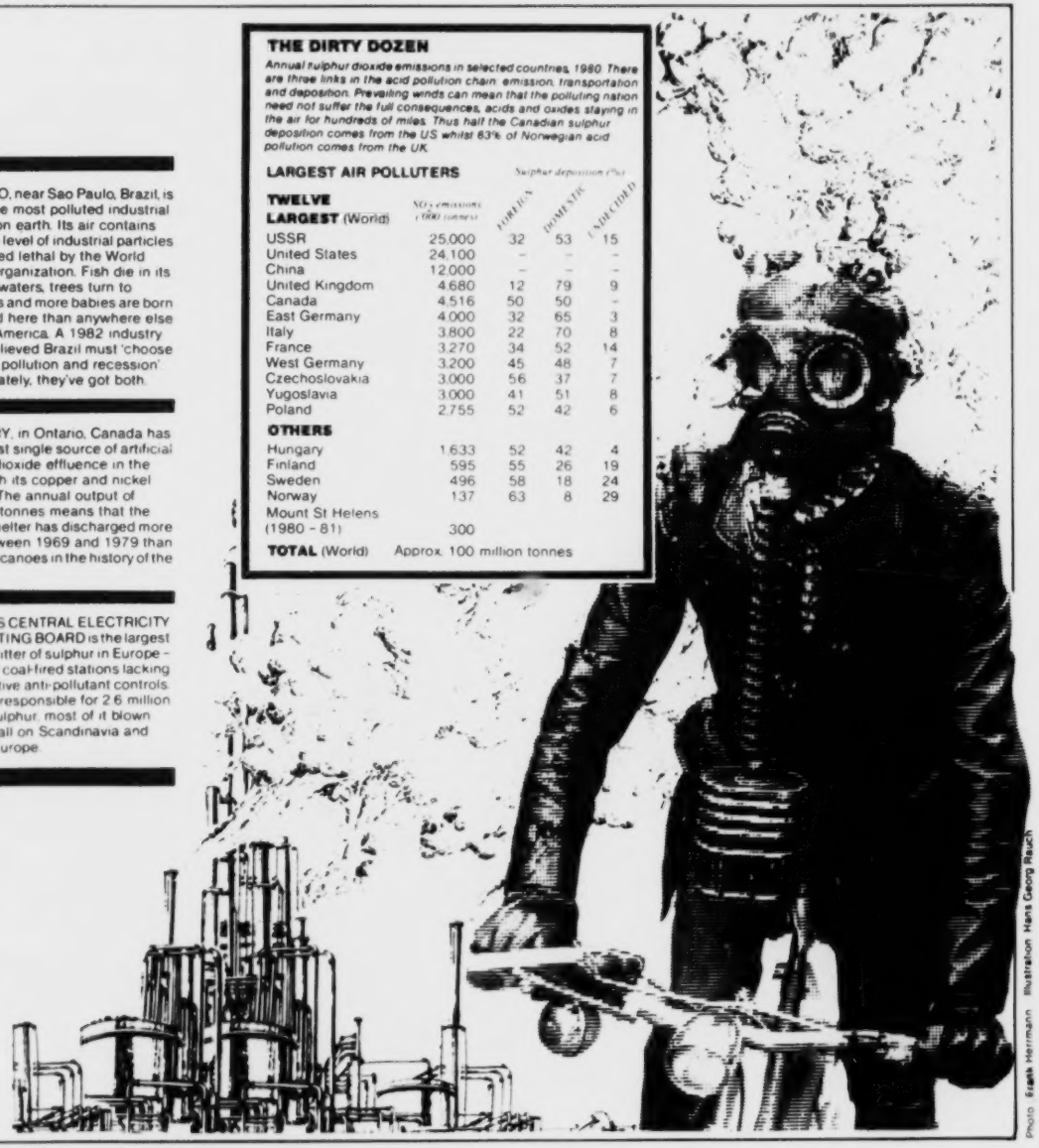


Photo: Frank Herrmann Illustration: Hans Georg Rauch

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The child of old Delhi

Urmila came with her parents to India's capital five years ago. Now she's a child of the city.

'I DON'T want to go back to the village,' says Urmila. 'If I'm forced to I will. But I won't like it.' Urmila, a shy 14 year old, has lived in Delhi for the past five years. Her parents moved from Uttar Pradesh because her father was sick with asthma. They thought he would get better treatment here, so they moved into one of the *bastis* (slums) across the Jamuna river from old Delhi.

Not that families like Urmila's live in very attractive condtions. Old Delhi is a labryrinth of small streets studded with mosques, temples, monuments and peripatetic cows. There are about 4,000 people per square kilometre; and about 40 per cent of the city live in such *bastis*.

Urmila was nine years old when they arrived. She and her 13-year-old sister and 10-year-old brother immediately looked for work. They would spend their time running errands, washing utensils or carrying goods through the narrow streets from about six in the morning when their mothers started preparing the day's meal. Her father, however, was so ill that he would stay at home to look after the baby.

At 6.30 in the evening they would all return home. The hut was lit by a paraffin lamp and the cooking done on a little stove with unburnt coal collected from the nearby railway station. By 9.30 they would all be asleep. After two years the routine was broken by the death of her father. The family split up and Urmila took a job as a domestic servant. She now earns Rs 150 (about $20) a month in the home of a wealthy industrialist.

'I look after the young children and play with the older ones when they return from school. Beside this I have to do jobs like cleaning, washing utensils, sweeping, dusting and cooking.' While it may be hard work, Urmila feels she is much better off than she was in the village. Certainly her health is better. Constant illness in Uttar Pradesh had slowed her growth: she is 14 but only looks about ten. 'While I was in the village I used to get six or eight bouts of diarrhoea a year. Now I don't suffer from that any more.' Malnutrition no longer saps her resistance to the diseases of the young, and she eats much the same food as her employers.

'I haven't gone back to Uttar Pradesh the last five years. I'd like to see my relatives again, but I don't want to live there. I enjoyed it as a little girl, but I hadn't seen the city then. It's much more interesting here. The only thing I don't like is the traffic – accidents terrify me.'

Source: *New Internationalist Calendar*, September 1988
By Greg Hayden and Penny Hume, Brisbane Grammar School

Student Exercises

1. The paragraph, "Chasing the Mirage", says, "Not only are migrants pulled towards the city, they are pushed out of the countryside ..." Construct a table that summarises these "push" and "pull" factors.

2. Use the graph, "Continental conurbations", to calculate:
   (a) How much the population is expected to grow by 2000 in:
      (i) Latin America
      (ii) Africa
      (iii) More Developed Regions
   (b) How much the population is expected to grow by 2025 in:
      (i) Latin America
      (ii) Africa
      (iii) More Developed Regions
   (c) Why is the estimated rate higher in some regions than others?
   (d) Where is the highest rate of urbanisation expected?
   (e) What do you predict could be the consequence of such high urban growth?

3. Use the bar graphs in "Urban Advantage" to assess whether health and education statistics support the view of urban immigrants that the city will provide better opportunities. Why might this be so?

4. (a) What expectations do rural dwellers, especially the young, have of cities?
   (b) Which factors could be responsible for such visions?

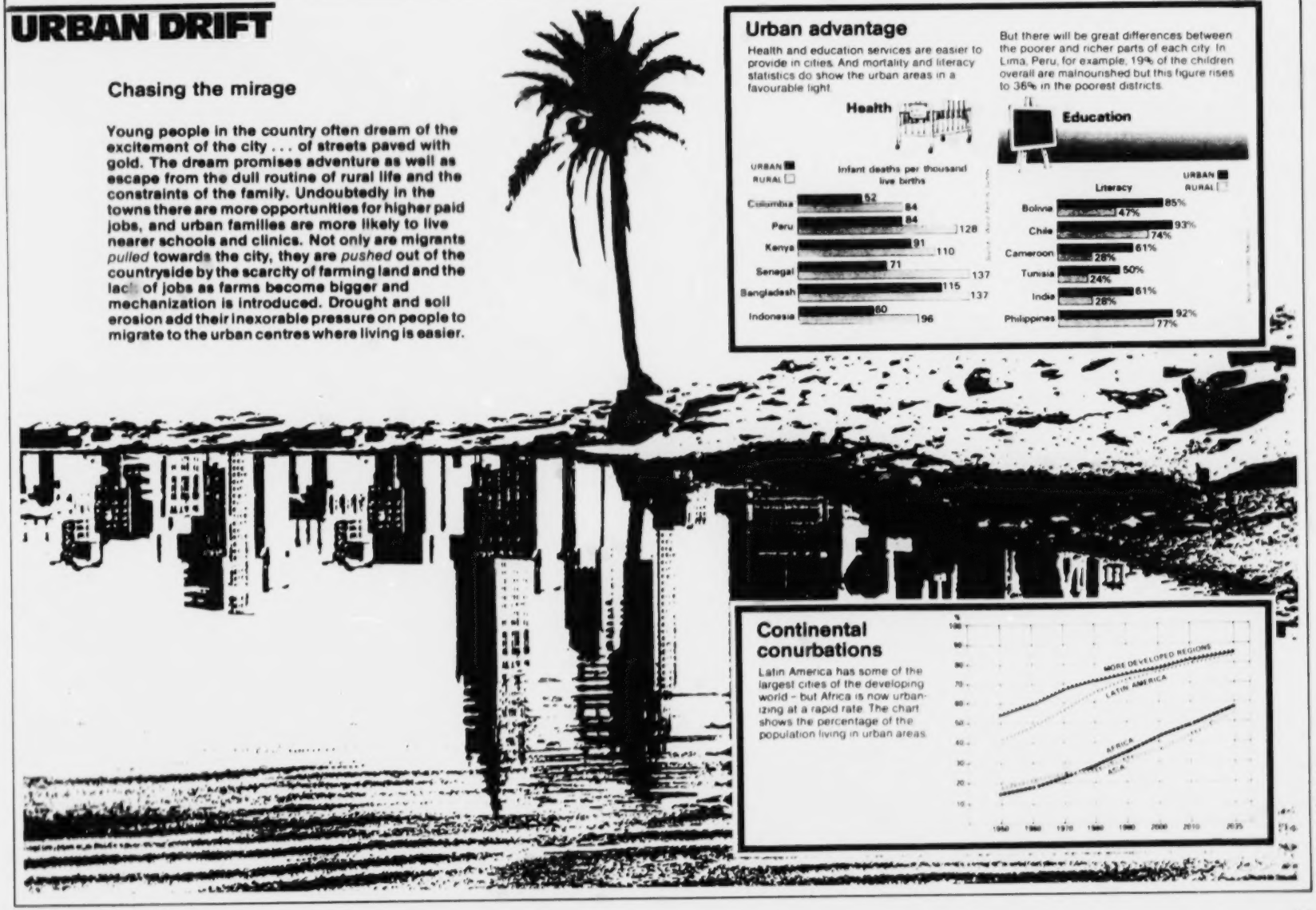
5. Read the passage, "The Child of Old Delhi":
   (a) Use a dictionary to find the meaning of "peripatetic". In the article a cow is described in such a manner. Why are such animals allowed to roam the streets of Old Delhi?
   (b) Urmila says quite emphatically that she will not return to her village to live. Why?
   (c) "Bastis" or "bustee" is the Indian word for slum or shanty town. Use a geographical dictionary to find the names used in other countries for similar areas.
   (d) Urmila has spent 5 years in the city. What advantages does she see as her prime motivation for staying in old Delhi?
   (e) What recollections of her childhood in her village reinforce Urmila's reluctance to return?
   (f) Does Urmila find any aspects of urban living daunting?

Continued on page 100

URBAN DRIFT

Chasing the mirage

Young people in the country often dream of the excitement of the city . . . of streets paved with gold. The dream promises adventure as well as escape from the dull routine of rural life and the constraints of the family. Undoubtedly in the towns there are more opportunities for higher paid jobs, and urban families are more likely to live nearer schools and clinics. Not only are migrants *pulled* towards the city, they are *pushed* out of the countryside by the scarcity of farming land and the lack of jobs as farms become bigger and mechanization is introduced. Drought and soil erosion add their inexorable pressure on people to migrate to the urban centres where living is easier.



Urban advantage

Health and education services are easier to provide in cities. And mortality and literacy statistics do show the urban areas in a favourable light.

But there will be great differences between the poorer and richer parts of each city. In Lima, Peru, for example, 19% of the children overall are malnourished but this figure rises to 36% in the poorest districts.

Continental conurbations

Latin America has some of the largest cities of the developing world – but Africa is now urbanizing at a rapid rate. The chart shows the percentage of the population living in urban areas.

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Living on stilts

I FIRST saw Guayaquil from the air. It was an amazing sight. To begin with I thought there had been a flood, some huge natural disaster which the world's press had not considered worthy of its attention – the thousands of houses below me seemed to be marooned in water that spread as far as the distant hills.

I soon found out how wrong I was. Guayaquil is Ecuador's largest port and industrial city, but it was built on swampland, and every day, at high tide, all but its wealthy areas to the north are flooded. Sixty per cent of the city's people live in these sprawling squatter settlements on the mud, the *suburbios*. Indeed some people live 40 minutes walk away from dry land.

It was Juan who showed me the *suburbios*. I met him on a street corner in the commercial centre of the city, its streets paved and formally laid-out on the Spanish model like so many in Latin America. He was trying to sell individual cigarettes to passers-by. He offered me one as a joke, realising that whole packets were cheap to Westerners. But, to his surprise, I bought one – I don't smoke, but I was interested in this chirpy little boy with the insolent smile. It seemed a good way to start a conversation.

Juan barely needed an excuse to talk – he couldn't have been much older than eight but he rattled away at a speed that tested my Spanish severely. Talking to a foreigner was more novel to Juan than pursuing what he called his 'little business', so he decided to show me where he lived. It didn't take us long to reach the *suburbios*. At first we were walking along normal streets, though according to Juan, the houses here were once built on stilts over the water like his own – the Town Council had filled in the swamp. 'One day they will fill in our street, too,' he said, 'and then we will be real citizens.'

The farther we walked, the stranger the city became. The roads turned into wooden catwalks over foul-smelling mud, and the houses into makeshift bamboo shacks, built with featherweight materials so as not to sink into the swamp. Juan's house was one of these, just one small room built on stilts. He was disappointed to find no one in but I was a little relieved – I didn't want to be offered hospitality by a family too poor to provide enough for itself. Instead I bought the rest of the boy's cigarettes and asked him to lead me back to dry land.

It was an endless maze, the kind in which you might find yourself lost in a nightmare. Yet all around there were people shouting to each other from doorways, children running down catwalks. Life goes on, even in Guayaquil – Juan does his 'little business', his family battles on courageously against the odds of poverty and ill-health and maybe, one day, their street will be filled. But why should they have to wait?

by Chris Brazier

Photo: UNICEF

Source: *New Internationalist Calendar*, November 1984
By Stephen Codrington, St Paul's Grammar School, Penrith

Student Exercises

1. Read the passage, "Living on Stilts" and answer the following questions:
   (a) What feature of Guayaquil makes it look amazing from the air?
   (b) What evidence is there that residents of Guayaquil are poor?
   (c) If you visited Guayaquil, would you have gone to Juan's house? Why?
   (d) Would you like to live in Guayaquil? Why?
   (e) Draw two sketches toshow the main characteristics of the area in which you live and to show the characteristics of the area Juan lives in.

2. Look at the two maps headed "Boom Towns".
   (a) How many of the world's top ten cities were in the Third World in 1950?
   (b) How many of the world's top ten cities will be in Third World countries in 2000?
   (c) What were the two largest cities in the world in 1950?
   (d) What will be the two largest cities in the world in 2000?
   (e) Use the information on the maps to complete this table

City	1950 Population	2000 Population
New York		
Tokyo		
Calcutta		
Shanghai		

(f) Mark with a star (*) the cities in the table which are in the Third World.

(g) Describe the difference in the way the Third World cities are growing compared with those in rich countries?

3. Read the paragraph called "Trek to the City". What are the three options for people arriving in the city from a rural area?

4. Read the paragraph called "The Shanty Towns". Describe the living conditions of people in shanty towns.

Continued on page 100

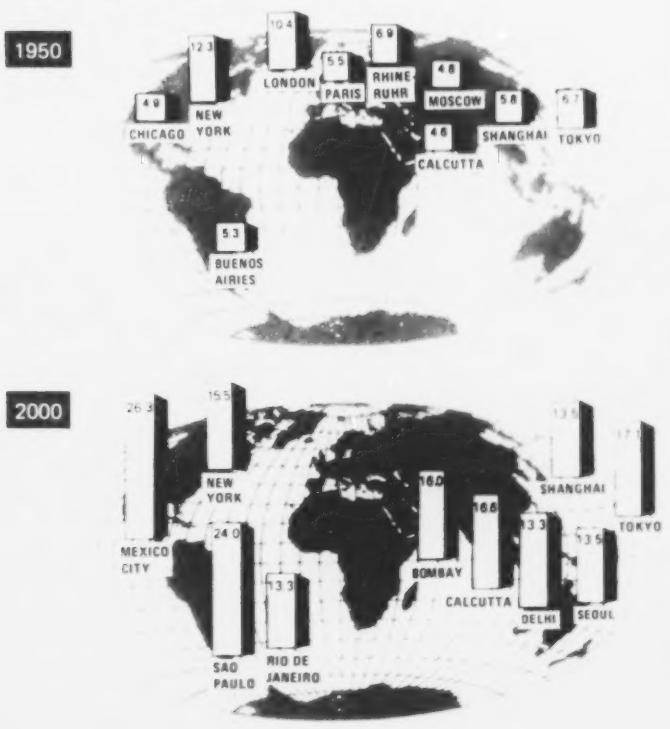
SHELTER

The Third World's cities are expanding at a furious rate. And, as more people move away from the countryside in search of a reasonable standard of living, the housing problem becomes more acute. The United Nations has declared 1987 the International Year of Shelter for the Homeless in the hope that governments will begin to provide adequate shelter for the urban poor.

Boom towns

In 1950 seven of the world's top ten cities were in rich countries. By the year 2000 the Third World will house eight of the top ten.

Figures in millions of inhabitants



Trek to the city

People arriving in the city from a rural area are likely to have little or no money. So they have three options. They can live on the street – and families can be found sleeping on pavements in every city from Delhi to Bogota. They can rent a room in an already-established shanty town. Or they can build their own illegal shelter on unused land.

The shanty towns

The fastest-growing city in the developing world is Nouakchott, in Mauritania, which was 43 times bigger in 1982 than it was in 1965. Rapid expansion of this kind means that as much as 75 per cent of the urban population lives in improvised shanty towns. With nowhere else to go, the poor create their own ramshackle cities by the side of railway tracks or even on stilts above the water.

Living conditions are often terrible, with no clean drinking water, no proper sanitation, and children unregistered, which means they are deprived of schooling.

Who benefits?

Keeping the urban settlements of the poor illegal is in the interests of:

- landowners who illegally subdivide and sell plots or who encourage squatter invasions so as to claim compensation from the government
- businesses which rely on slum and shanty-town populations to provide cheap labour
- slum landlords and their political protectors in high places.

The way forward

Simply dismantling shanty towns is not an option, since people have nowhere else to go. The most practical way forward is to legalise all unofficial settlements and offer electricity, sanitation and sewage. This would be an inexpensive way of providing better housing for the poor.

Photo: Mark Edwards

33

Justice by night

SSSHHH!' Paulo tries to quieten his screaming baby. Ana suckles another, younger child. The crowded truck, driving blindly through the moonless night, gives a sudden lunge as it hits yet another muddy rut. Bodies of children, women, men are thrown together with hoes, shovels, pitchforks and rolls of plastic sheeting. Even in the confusion everybody keeps as quiet as possible. No one dares to light a torch.

For this is what the landowners call an 'invasion' – though the landless peasants crammed into this ragged convoy of trucks call it an 'occupation'. Under the cover of night 3,000 rural workers are peacefully moving onto farm land that has been left idle for years – and creating a small corner of social justice in an enormous country which ignores their hunger.

It's a risky business. Landowners are willing to spend millions of dollars a year on private armies to protect their property – even if they make little use of it themselves. But for Ana and Paulo – two of the 12 million landless workers in Brazil – the risks are worth taking. Torn by the helpless pain of watching two of their children die from malnutrition they no longer believe in the empty promises of land reform made by governments that serve the landowning elite.

'Sshhhh, little one!' To Paulo, the baby's persistent screaming seems to be ripping apart the canopy of night, alerting an imaginary army of machine-gun-toting guards. Ana is meanwhile trying to overcome her nervousness by planning in her mind what she will do tomorrow, after they have rigged up a simple plastic sheeting shelter on their new home. What should they plant first? Maize? Manioc? Will the soil be fertile enough?

From Brazil to Bangladesh, poor people are agitating for land. It is an uphill struggle. Local landowning elites remain extremely influential in both national and local politics. Many landowners are politicians themselves. So radical land reform programmes might be on government agenda – but this is where they generally stay. Or else they are carried out in a half-baked way that rarely benefits the poorest.

Mass seizures of land by poor people are nothing new. Urban squatters from Bangkok to Bogota have been doing it for years. It is far more difficult and unusual for the widely dispersed, traditionally conservative, rural poor to unite in this way. But Ana, Paulo and the others taking part in this 'occupation' know real change will not come from above. It can only come from below. From themselves.

Source: *New Internationalist Calendar*, November 1988
By Stephen Brown, Shailer Park State High School, Brisbane

Student Exercises

1. Read the passage, "Justice by night", and answer the following questions:
   (a) Why are 3,000 workers moving silently at night?
   (b) How many landless workers are there in Brazil?
   (c) What are the names of the Brazilian couple mentioned in the passage?
   (d) Explain the following terms and words (i) landowning elites (ii) land reform and (iii) malnutrition.
   (e) In 2 or 3 lines, summarise the main message(s) contained in the passage.

2. Explain the meaning of the title of the passage "Justice by night"? Do you think this is an appropriate title for the passage? Why?

3. Why do people have to resort to mass land seizures to obtain land?

4. Do you think mass land seizures are a long term answer to the problem of no personal land ownership by rural workers in developing countries? Giver reasons to support your answer.

5. Write your own conclusion to the following sentence: "No land for rural workers in developing countries means ....."

6. Do you think Australia has landless groups or individuals? If you answer yes, describe the types of groups or individuals who are landless in Australia and reasons(s) for their landless state? If you answer "no", explain why.

7. What do you think the term "justice" means in the context of the passage entitled "Justice by Night"? Do you think justice is being done? Why?

8. Study the bar graph showing "Percentage of land belonging to the 10% of landowners" and answer the following questions:
   (a) Using an atlas and blank map of the world, label the 10 countries on the bar graph.
   (b) Shade in the countries on your map. Give your map a title, key/legend and a border.
   (c) Describe the pattern shown by your map.

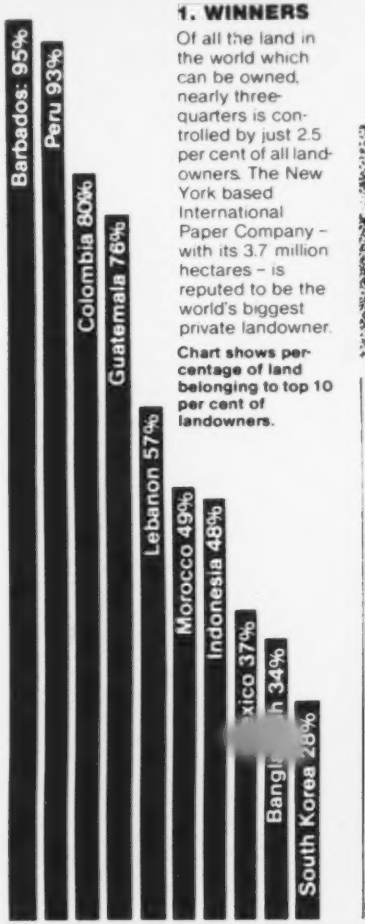
9. Study the bar graph of "Rural households that have no or practically no land".
   (a) What countries are on this graph and the one on "Percentage of land belonging to top 10 percent of landowners".

Continued on page 101

LAND

Need or greed

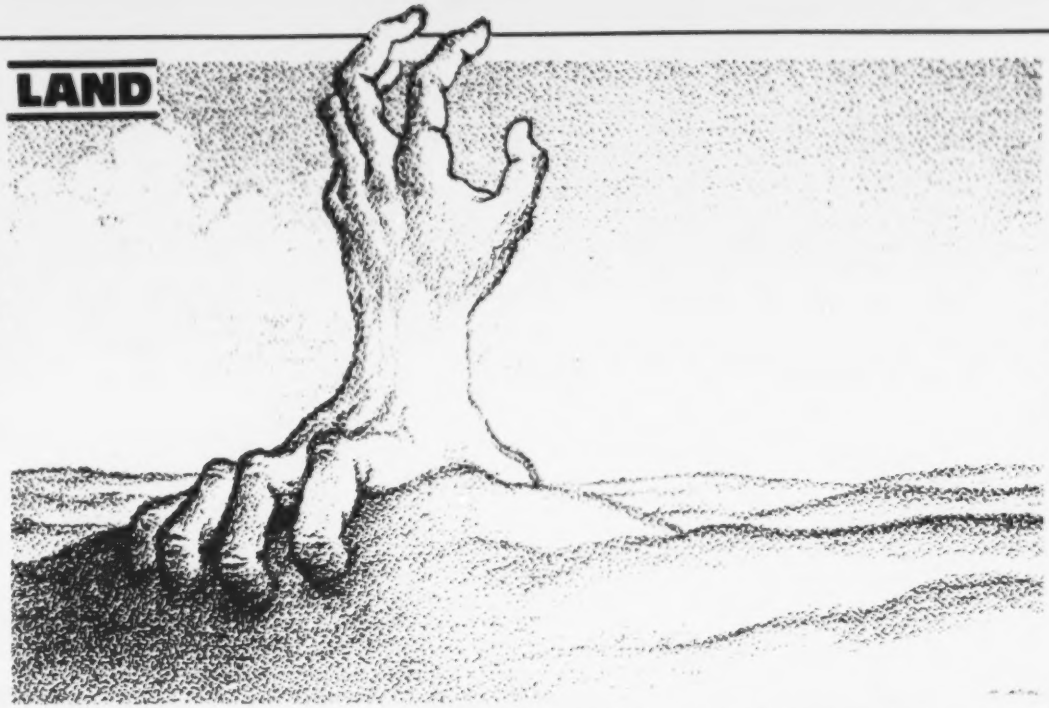
Hunger for land is growing daily. More than half the rural population of the Third World is without land. But in most countries this is not because there is too little to go around. Of the 21 per cent of the world's surface which is cultivable under eight per cent is currently farmed. The trouble is that too much land is in the hands of too few people.



1. WINNERS

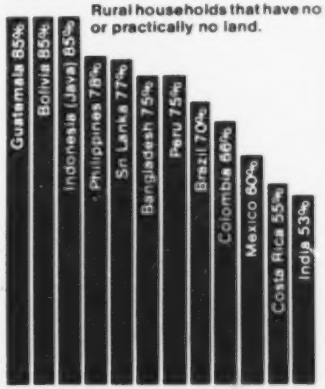
Of all the land in the world which can be owned, nearly three-quarters is controlled by just 2.5 per cent of all landowners. The New York based International Paper Company – with its 3.7 million hectares – is reputed to be the world's biggest private landowner.

Chart shows percentage of land belonging to top 10 per cent of landowners.



2. LOSERS

For the rural poor being landless means having no secure access to food. Not surprisingly the infant mortality rate is significantly higher in families which have no land than in those which have even just a little.



Rural households that have no or practically no land.

3. SOWERS AND REAPERS

The people who grow the food are in most cases not the ones who reap the profits. Women grow 75 per cent of Africa's food. But it's usually the men who own the land.

In Brazil 70 per cent of agricultural workers have no land of their own. But over the past 20 years governments have granted kingdom sized concessions of several million hectares each to multinational corporations such as Volkswagen, Mitsubishi, Liquigas, King Ranch, and Swift Armour. These were used to provide pasture grass for cattle destined for the profitable beef export market.

4. SQUATTERS AND SPECULATORS

Land does not only mean access to food. It also means shelter. About half the people living in Third World cities have no secure home.

- In Yaoundé, Cameroon, 80 per cent of the people live in illegal squatter settlements.
- In Bombay, India, between 100,000 and 500,000 people live on the pavements.
- In Mexico City 60 per cent of the population live in illegal shanty towns.

Meanwhile, in the West, fortunes can be made by the few who can play the property market.

- The world's most expensive piece of land for development is in central Giza district of Tokyo, Japan, where the site of the Crown nightclub was bought for $20,915 per square foot.
- The highest rents in the world for prime sites are Manhattan, New York at $68 per square foot and the City of London at $51 per square foot – but with service charges and rates London is top at $87.

5. REFORM AND RHETORIC

Virtually every developing nation has policies for land reform. Some have put them – or corrupted forms of them – into practice:

Successes

China: Nearly 47 million hectares were redistributed between 1950 and 1953 affecting 487 million people. By 1975 China's yield per hectare was almost double what it had been before the Revolution and 60% higher than India's. Today, China feeds a population 50% bigger than India's, 20% better with 30% less cultivated land.

North Vietnam: At least 45% of arable land was redistributed between 1954 and 1957 to the benefit of 77% of rural households. Yields of rice went up by 20% and of other crops by 50% between 1960 and 1970.

Failures

Peru: The left-wing military government of Juan Velasco set in motion an 'authentic' land reform in 1969. But only about a third of the rural population benefited. Around 700,000 of the poorest farmers in the mountains and seasonal labourers who comprised 25% of the rural labour force on the coast were bypassed altogether.

6. PROTECTORS AND POLLUTERS

Just as important as who owns land is what they do with it. Large-scale agriculture and heavy use of pesticides impoverishes the soil and does irrevocable damage to the environment. It makes much more sense, both socially and environmentally, to support small farmers who take better care of the land.

- **At the current rate of destruction the Brazilian rainforests will be gone in 35 years.**
- **Two thirds of the world's surface is threatened with desertification if current large-scale, fertiliser- and pesticide-intensive farming methods continue.**

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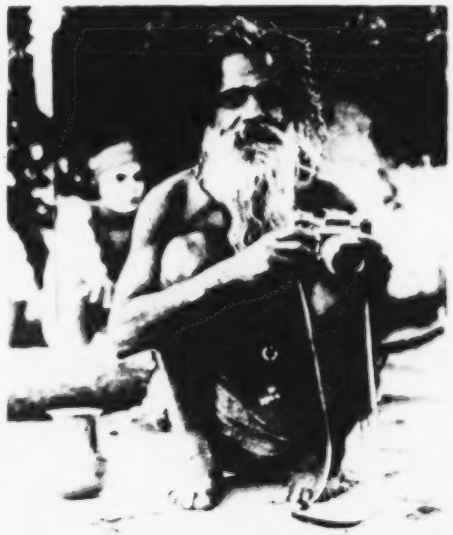
The camera's special effects

'SOMETIMES I wonder if we're richer than before. Things have changed so much. Before the white tourists came we had very little money – we grew enough to eat, and sometimes there was a bit over to sell in the market. Then the King started to build the roads and the tourist people brought their money. Some of the women invite the young, long-haired ones to stay on the floor of their hut for a few rupees. The rich ones don't come here – they stay in Kathmandu in the foreign hotels that rise over the city like mountains.

'But things are no easier. The young boys say the new drinks and clothes are better – they don't like our old ways. They buy clothes in Kathmandu like the tourists wear – I suppose they are better, but they look dull.

'We don't see our son Prakash very often nowadays. He goes up into the hills to buy Buddhist prayer-wheels and then stays in Kathmandu to sell them to the foreigners. We are very proud of him. He has done well,and he tells us stories about the Japanese motor-bike he will buy. But I wish he could live here. We all miss him and the work in the fields is difficult without his strong arms. When I was a boy families stayed together. Everybody says the new things are good. But sometimes I can't help wondering. . .'



The Fish-Tail Mountain looms magnificently over the lake at Pokhara in Nepal, with the Annapurna range hulking beyond it. It's a perfect invitation to the camera. The tourists who get this far are more intrepid than those lying on the palm-fringed, coca-colarised beaches of the Bahamas, but they are still tourists. Those who return say that every year Pokhara becomes more 'commercialised', more 'spoilt', as the stalls and cafes multiply along the lakeside road.

For them 'spoilt' means partly that the natural beauty of the scene is being ruined for them and their photos. But it also implies that Nepalese culture is being tainted by tourism,that the contact is unhealthy.

How do the Nepalese themselves feel about it? They live, after all, in the seventh poorest country in the world. Nepal's only natural resource, its one hope of foreign exchange, is the beauty of the Himalayas. Money from tourism hasn't just brought Japanese cars and European cuisine to Kathmandu – it has also distributed money to Sherpa people in isolated mountain regions as Westerners trek towards Everest.

Other countries have conceded more to tourism, but the argument about whether it aids development or threatens economic and cultural independence goes on, from Nepal to Antigua, Tanzania to Bali.

Source: *New Internationalist Calendar*, October 1985

By Joanne MacDonald and Ann Darcy, Merrimac High School, Gold Coast

Student Exercises

1. The following questions relate to the diagram, "World Tourism Arrivals".
   (a) By how much have World Tourism Arrivals grown from 1958 to 1982?
   (b) If you divided that time period into 6 year units, by how much, on average, would it have increased over each 6 year unit?
   (c) Compare the average increase for each 6 year unit to total world tourist arrivals in 1958.
   (d) Suggest some reasons for this trend.
   (e) From which socio-economic background would most of the people who are contributing to these figures belong? Why?

2. Examine the pie graph, "Share of Tourism in 1982", and the numbers given below it.
   (a) What is a Third World Country?
   (b) In which continents in the pie graph do we find Third World countries?
   (c) What percentage of the total world tourist arrivals in 1982 were to Third World countries?

3. Read the passage, "The Camera's Special Effects", and answer the following questions:
   (a) Imagine you are the son, Prakash:
      (i) What work do you do each day?
      (ii) What other types of jobs might you do if you chose to change jobs?
      (iii) How much contact do you have with tourists?
      (iv) What do you see as evidence and reminders of tourists?
   (b) Imagine you are the Nepalese father of Prakash.
      (i) What types of activities might you be involved in each day?
      (ii) What are you left with as reminders of tourists?
   (c) How has tourism changed the lives and values of the Nepalese people?
   (d) Imagine you are a tourist in Nepal.
      (i) What features might have attracted you to Nepal? Categorise these features as natural, traditional and tourist facilities.
      (ii) What do you have as reminders of your visit?
   (e) In what ways are the momentos that the tourist has of Nepal and the momentos Nepalese have of tourists different? Why
   (f) Pokhara has been described as "spoilt".
      (i) What has ben spoilt? How?
      (ii) Who has it been spoilt for?
      (iii) Who has it been spoilt by?

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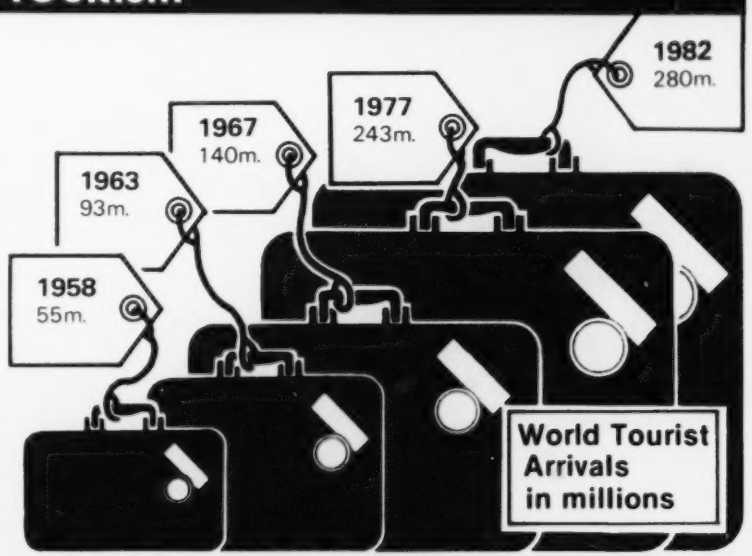
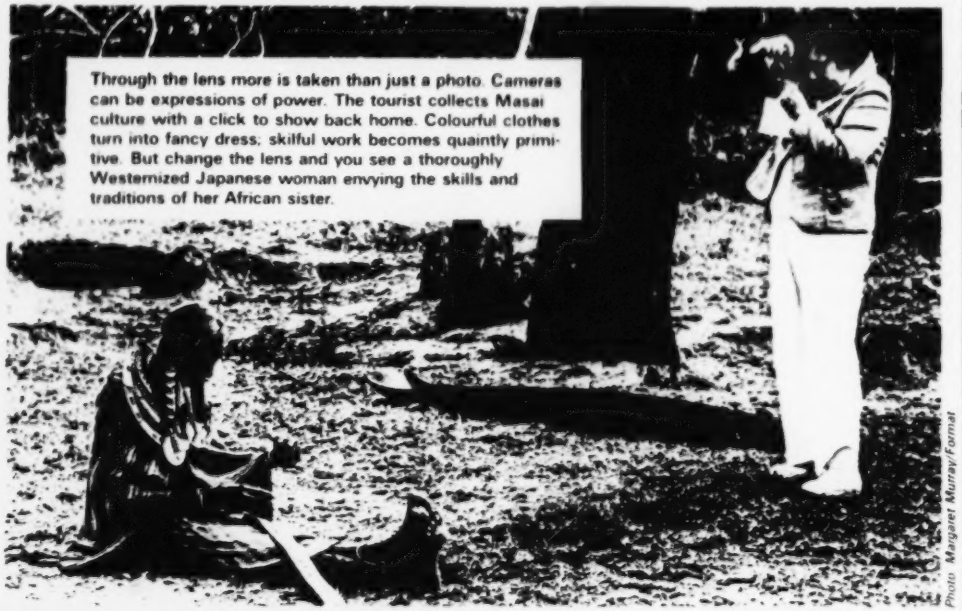
TOURISM

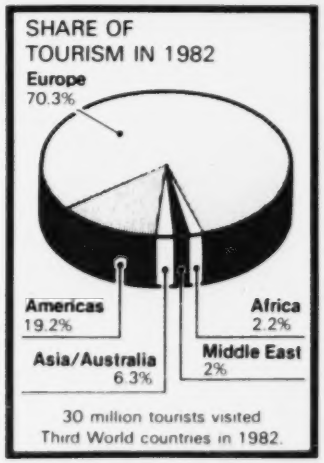


Source: International Tourism Quarterly No 1 1983



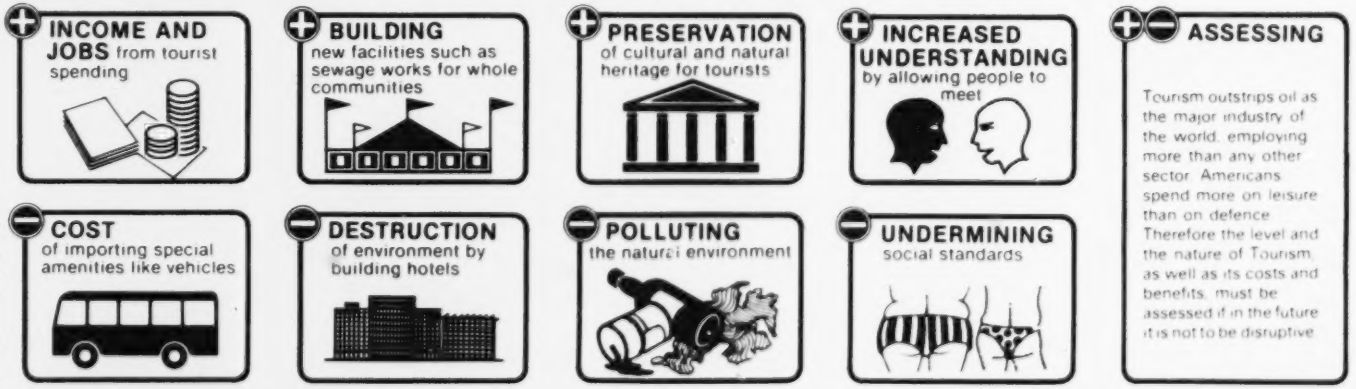
Through the lens more is taken than just a photo. Cameras can be expressions of power. The tourist collects Masai culture with a click to show back home. Colourful clothes turn into fancy dress; skilful work becomes quaintly primitive. But change the lens and you see a thoroughly Westernized Japanese woman envying the skills and traditions of her African sister.

Photo: Margaret Murray/Format



Costs and benefits of tourism

Tourism can be attractive for developing countries. But there are social, economic and environmental disadvantages as well as advantages.


INCOME AND JOBS from tourist spending
BUILDING new facilities such as sewage works for whole communities
PRESERVATION of cultural and natural heritage for tourists
INCREASED UNDERSTANDING by allowing people to meet
ASSESSING
Tourism outstrips oil as the major industry of the world, employing more than any other sector. Americans spend more on leisure than on defence. Therefore the level and the nature of Tourism, as well as its costs and benefits, must be assessed if in the future it is not to be disruptive.
COST of importing special amenities like vehicles
DESTRUCTION of environment by building hotels
POLLUTING the natural environment
UNDERMINING social standards

Illustrations: Peter Sullivan

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The right machine for the job

IN the beginning, before the white people came, the women in the village worked in the fields with hoes and spades. The men would help sometimes but usually only supervised and sold what produce was left at the end of the season. The work was hard and broke their backs. But everybody grew enough to eat.

Then came the first expert. He talked of progress and modernisation, a world where work would be easy and money plentiful. His organisation donated a tractor to the village. It roared and spluttered impressively and the men were so interested that they decided to take over the preparation of the land. But after three weeks the tractor broke down. The government officer in the town said he'd send a mechanic but it would take two months. When the mechanic came after four months he said it would need spare parts from Canada. Meanwhile the women had gone back to preparing the ground and the men to supervising. The tractor is still rusting over there by the trees – children come from miles around to play on it, and girls now get to sit in the driving seat as their mothers had not been allowed to do while the machine was working.

The second expert came ten years later. He told the villagers how Western technology was no good for African people, how it put them into debt. They told him about the tractor and he nodded his head, saying 'You see?' They did. He promised to bring them a simple machine made with local materials that they could use to grind their own flour instead of paying to have it done ten miles away. When the mill arrived it looked very impressive but it was powered by someone riding a bicycle. And in the village only women grind flour and only men ride bicycles – bicycles aren't as good as tractors at persuading men to work. Now the mill is rusting over there by the trees, too.

Then a third expert came to the village. She stayed for three weeks, not just a morning. And instead of describing her wonder machine she simply asked 'What do you want?' She asked the women as well as the men and sat with them talking about their life and how it could be improved. Eventually the village decided that what it wanted most was hoes and spades that didn't break. They discussed how to get them with the outsider – could the village smith be trained to make better tools or should they buy them from the town? It seemed best in the end to do both. The village forge wasn't sophisticated enough to produce the stronger tools necessary, so the expert's organisation agreed to pay for a batch to be made in the town. But the village smith went to the larger forge and helped them to make the right kind of tools – so his own skills were improved for the future

Now the women prepare the fields with tougher hoes and spades. The men still supervise. The work is still hard. And it still breaks backs – but not spades.

Source: *New Internationalist Calendar*, March 1986
By Nick Hutchinson, Pittwater High School, Sydney

Student Exercises

1. Read the passage, "The Right Machine for the Job", and answer the following questions
   (a) How many experts visited the African village?
   (b) How did the attitude of the experts change?
   (c) Who does most of the work in this society? Women or men?
   (d) Why did the little girls, in particular, like to play on the tractor?
   (e) Why didn't the bicycle driven flour mill work properly for this community?
   (f) What was the "appropriate form of technology" adopted by the villagers in the end?
   (g) Why were men reluctant to adopt new technology in the African Village?
   (h) Why is some of the technology used in the "rich world" totally inappropriate for the people of the poor world?

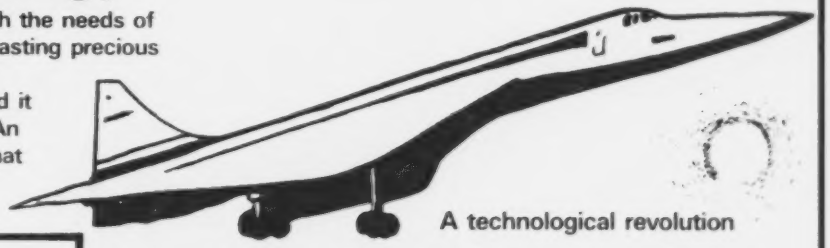
2. Study the large diagram called "Appropriate Technology"
   (a) How many times more efficient is village biogas technology than coal based nitrogenous fertiliser production in terms of:
      - cost
      - no of jobs created
      - payments overseas (foreign exchange)
      - energy expressed in tonnes of coal equivalent.
   (b) How much more costly was the Concorde aircraft than the water carrier?
   (c) Explain how the clay jar is able to filter potable water.
   (d) Where do you think the water carrier was invented? Why?
      - the NASA centre in the USA
      - Mombassa in Africa
      - Lyons in France.
   (e) How effective is the food preservation cabinet for keeping foods in the tropics?
   (f) What other types of appropriate farming methods would be useful in the Third World?
   (g) Why do countries like Australia rely on nitrogenous fertiliser and countries like China rely on biogas?

3. What kinds of appropriate technology can you use?
   (a) Imagine a solar clothes drier. Did you think of washing, drying on a "Hills Hoist"?
   (b) How can your use of energy be more efficient in your home?
   (c) Try to invent something that would improve the lifestyle of:
      - a Masai herder
      - an Indian growing maize in Mexico
      - a Bangladeshi rice farmer.

Continued on page 102

Appropriate technology

Western technology often doesn't match the needs of developing countries. It is expensive, wasting precious foreign exchange; spare parts for the machinery will need to be imported; and it can mean fewer jobs available locally. An appropriate technology would be one that fitted local conditions, local needs and local purses.



A technological revolution

This piece of technology knocked 200 minutes off the time it took to transport 100 people from London to New York. It has sonic boom. It cost $40,000,000.

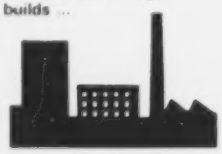
THE WORLD SPENDS ...

$10,000 million a year on modern industrial technology but only $100 million on appropriate technology.

Counting costs

A developing country might need 230,000 tonnes of nitrogen fertiliser per year. It can choose two ways of producing it.

Western technology builds ...



One large coal based plant in the city.

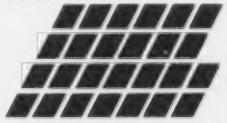
This costs $280 million and loses foreign exchange of $140 million.

This method creates:

1,000 jobs

Energy consumption by large city plants is 12,200 tonnes of coal equivalent.

Appropriate technology builds ...



26,150 small village biogas plants. Biogas is methane produced by fermenting dung.

This costs $250 million and loses no foreign exchange.

This method creates:

130,750 jobs

The biogas method generates energy equivalent to 77,470 tonnes of coal.

Another technological revolution

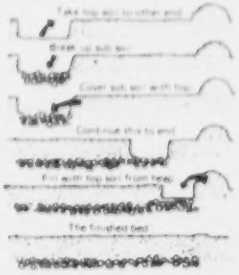
This piece of technology knocked 14 hours off the time it took to transport a day's supply of clean water for a village from the well. It has no sonic boom. It cost $42.

Simple solutions

Purifying water

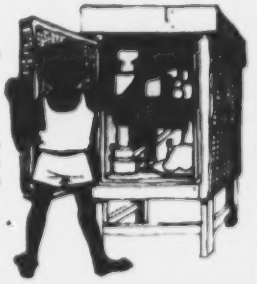
A supply of clean water is vital for health – yet half the people in the developing world have no access to it. Filtering water in a clay jar is an easy and effective way of fighting disease.

Enriching soil



Using appropriate methods in farming is as important as buying the right tools. A process as simple as this enriches the soil and increases next year's crop yield.

Keeping food



Food preservation in tropical climates is always a problem. In this cooling cabinet water drips down from the top tray via cloth strips. It then runs slowly through side frames made of broken charcoal sandwiched between chicken wire mesh.

Illustrations Clive Offley

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The disappearing middle

FATE has given me the name of a shoemaker. If you want to be a good shoemaker, it is not good enough to make good shoes and to know all about making good shoes, you also have to know a lot about feet. Because the aim of the shoe is to fit the foot. But most of us have never thought about this.

There used to be a story about a country that unduly indulged in central planning. They had developed the finest boot the world had ever seen and they ordered 500 million pairs of this boot, all of the same size. Well, that is what we tend to do, because we don't really think of the poor being real: we tend to think that we have the answer.

You cannot help a person if you yourself don't understand how that person manages to exist at all. This came to my attention quite a long time ago when I first visited Burma and then India. I realized that they were able to do things that we in the West could not do. But if I, as an economic magician, could double the average income per head in Burma from the $30 it was at that time to $60, and if I could do that without destroying the secret pattern of life which enabled them to live, then I would have turned Burma, I am sure, into the nearest thing to paradise we know.

But coming from England I realized that we couldn't even survive on $300 per person. If I doubled the income of Burma from $30 to $60 whilst changing the traditional Burmese pattern into the English pattern, then I would have turned Burma into the world's worst slum. Yet I listened to all the economists, and all the people who talked about development aid, and nobody ever talked about this particular factor, this pattern. They went into these countries like a bull into a china shop. They said, 'Step aside, now we will show you how to live properly when you are really rich.' The poor people of Burma stood on the sidelines and said, 'But we are not rich, so what you are showing us is of no interest to us, except the few people in our own countries who are already rich.'

Then I went to southern India. I was a lucky person because the right question occurred to my mind. Everything begins with a question, and the right question was, 'What sort of technology would be appropriate for rural India?' Surely not the technology of Pittsburgh or Sheffield, of Dortmund or Tokyo?

I came to a very simple provisional answer. Such a technology would indeed be much more intelligent, efficient – scientific, if you like – than the very low-level technology employed there, which kept them very poor. But it would also be very, very much simpler, very much cheaper, very much easier to maintain, than the highly sophisticated technology of the modern West. In other words it would be an *intermediate technology*, somewhere inbetween.

And then I asked myself another question: 'Why do they not use an intermediate technology? Why do they not use boots that fit their feet?' I realized that in terms of available technology, either it was very very low or it was very very high; but *the middle had disappeared.* An intermediate technology was nowhere to be found.

by E.F. Schumacher, founder of the Intermediate Technology Development Group

Photo Dexter Tiranti

Source: *New Internationalist Calendar*, July 1987

By Susan Anderson, Bev Schultz and Kylie Scott, Brisbane College of Advanced Education

Student Exercises

1. Study the passage, "The Disappearing Middle" and answer the following questions.
   (a) What do you think the title, "The Disappearing Middle", means? Why?
   (b) Where do you think the author of the passage is employed? Why?
   (c) What is this person's occupation? How can you tell?
   (d) In your own words, what is "intermediate technology"?
   (e) Why are locally made tools cheaper than overseas imports?
   (f) Until recently, what has been the general pattern of development aid to Third World countries? Why is it that "simple kinds of help" can often be the most valuable?
   (g) The author states in the passage: "You cannot help a person if you yourself don't understand how that person manages to exist at all". Explain this statement in relationship to intermediate technology.

2. When the author of this passage first visited people in Burma and then India, he "realized that they were able to do things that we in the west could not do". Name some of these "things" that they could do that people in the west could not do.

3. Imagine that you are the shoemaker in Burma. Write a diary page describing your typical day in Burma, from the time you wake up in the morning, until you go to sleep at night.

4. Do you agree with E.F. Schumaker that, by changing the traditional Burmese pattern into the English pattern, it would have turned Burma into the world's worse slum? Give reasons for your opinion.

5. Study the information in the large diagram, "Tools for Change".
   (a) What are the problems facing tradesmen and apprentices in the Third World with regards to tools?
   (b) Name two reasons why sending tools to Third World countries is not "like crumbs from the table of the rich".
   (c) Make a list of tools which are used by carpenters and farmers, that could easily be shipped to Third World countries.
   (d) How could Third World countries benefit from these tools?
   (e) Brainstorm various ways to finance the shipment of these tools.
   (f) Write a letter to Community Aid Abroad in your State asking how your class can help refurbish and send tools overseas.

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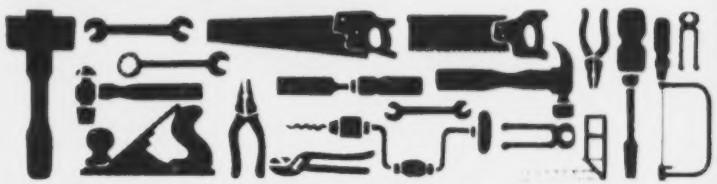
TOOLS FOR CHANGE



The most simple kinds of help can also be the most valuable. Providing farmers or carpenters with basic tools that make their work easier, whether by refurbishing those that the West discards or by improving the training of village smiths, is often more practical and useful than the large-scale projects funded by governments.

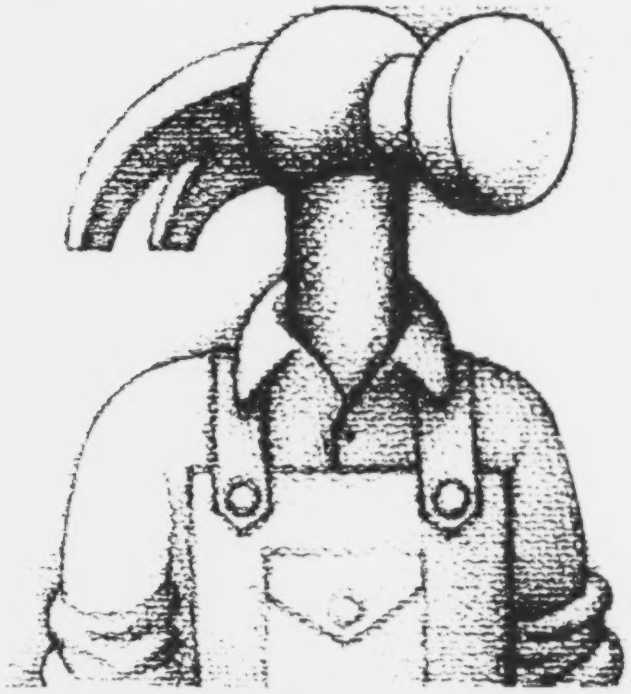


Illustration Hector Catrolica

Photo Tools for Self-Reliance

The village smith

Smiths were a vital part of every community in the world until well into this century. They still fulfil a vital function in much of the Third World, where motor transport and mass steel production are less possible. And often their work is undervalued – people assume that only tools and equipment manufactured in the West will function properly. It is true that locally-made tools are often inadequate to the tasks they are expected to perform – the shovels that the smith is fashioning from scrap metal in the colour photograph are unlikely to stand up to the battering they will receive in the fields. This is due rather to the inferior quality of the steel available than to the smith's lack of skill. But that skill should be encouraged and developed – not bypassed in a way that increases dependence on the West.

Sending tools

Sending shipments of used tools to the Third World might seem a little like crumbs from the tables of the rich. But the fact is that carpenters, metalworkers and other artisans in developing countries have great difficulty in obtaining hand-tools of the quality they need. The tools they have are often worn down, damaged, or improvised out of soft metal which is impossible to sharpen to a fine cutting edge. Young apprentices completing wood and metalwork courses often go unemployed because they find it so hard to assemble a kit of tools with which to put their new skills to productive use.

In the West we are so wasteful that we leave millions of tools rusting in our sheds and workshops – hammers and saws, chisels and planes. Yet these can be refurbished by volunteer groups to the original standard – and provide practical development education for those volunteers as well as tools that will be used to improve schools and homes, carts and ploughs, all over the Third World.

Organisations that will offer more information about the sending and refurbishing of old tools are: Tools for Self Reliance, Netley Marsh Workshops, Southampton SO4 2GY, UK; Aid Tools Australia, 23 Ballast Point Road, Birchgrove, NSW 2041, Australia; Oxfam America, 115 Broadway, Boston, Mass. 02116 USA; Gered Gereedschap, PO Box 3767, 1001 AN Amsterdam, Holland.

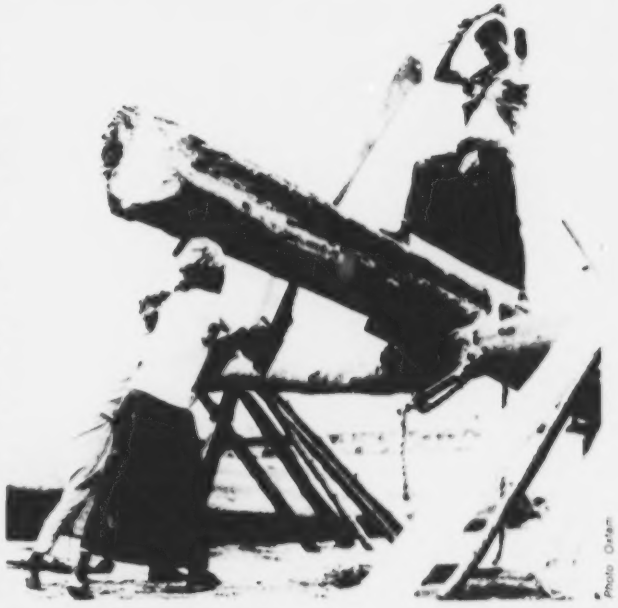


Photo Oxfam

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Aid-brick by brick

IN one remote village of northern India the people have been dancing and singing late into the night. But not for any usual reason. This is to celebrate the announcement by Britain's Minister for Overseas Development of a $150 million aid package to India 'focussed on the rural poor'.

It seems that a mathematical wizard in the form of the village schoolmaster has calculated that each man, woman and child should receive no less than five rupees, the price of a day's labour.

Some, of course, intend to take a day off work, but the more capitalistically-minded have made plans to buy seed, goats, or a sari for the wife.

In the midst of the dancing and drum-beating someone asks why they didn't get the money last year? At $114 million, according to the Minister's figure, there should still have been at least four rupees for everyone. 'Who has cheated us?' asks a man balancing a bamboo mug in his hand.

'Well, it's not quite as simple as that,' says the schoolmaster. 'You see, only $60 million is for local costs.'

'What does that mean?'

'It means that only $60 million out of $150 million is spent in India.'

'Where does all the rest go?'

'That's for the Experts and things like that. So we are down to about two rupees each.'

The drum has stopped beating and the dancers gather in a circle round the schoolmaster as he sifts his papers.

'Where's our money then?'

'It does say that $36 million is for 'poverty alleviation'. That ought to be for us, but they give through projects.'

'What sort of projects?'

'It says here ... 26 projects for coal, 18 for power, 16 for industry and 15 for oil and natural gas.'

'Is that for the rural poor?'

'I don't really know,' says the schoolmaster diplomatically. 'But there are still a few more. 14 projects for railways. There you are – the railways go through the rural areas, don't they? And sometimes the trains stop. Next comes urban development, six projects – we will pass over that – and then shipping, four projects. Maybe the sailors come from rural areas? Look, there are five projects for renewable natural resources. That's the one for the poor.'

'Like what?'

'Fertiliser education project ...'

'For the big farmers with irrigation, but what about us?'

'Animal husbandry,' he said triumphantly. 'What does it say ... An abattoir in Delhi.'

'For cows?'

He moved on quickly.

'A duck-breeding project.'

'Well at last! That's something. How many ducks do we get?'

'You don't get the ducks. You get a Centre. People come from abroad and tell you how to keep ducks.'

'But we know how to keep ducks!'

'Not these kind of ducks. They are special. You can't even keep them here in these remote villages.'

'Then what's the use to us?'

By this time the crowd had become decidedly menacing.

'O.K. So we don't get five rupees, or two rupees, or even a duck. Do we get some little part of a rupee – maybe a few filings off the edge?'

The schoolmaster looked up guiltily, still reading from his papers.

'Inflatable boats for Orissa?'

The villagers stirred angrily.

'Research Vessel for the Geological Survey?'

The first sandal struck him across the shoulder.

'Radar for Bombay Airport?' he choked, gathering up his papers. The strong hand of a labourer lunged towards him but with surprising agility he darted away over the fields, trailing papers which were hurled into the air by a crowd of hungry children.

Source: *New Internationalist Calendar*, February 1986

By Julie Smith, Moreland High School, Melbourne; and Marilyn Wiber, Mentone Girls' Grammar School, Melbourne

Student Exercises

1. Read the passage, "Aid - Brick by Brick", and answer the following questions:
   (a) What is meant by the term "aid package"?
   (b) Who is giving the $150 million "aid package"?
   (c) For whom is the $150 million package intended?
   (d) What complaints do the villagers have about the previous year's aid money?
   (e) How much and what percentage of Britain's aid to India was actually spent within India the previous year?
   (f) Where did the rest go?
   (g) How much was earmarked for alleviating poverty?

2. What is meant by the word "projects"?

3. List the types of projects intended to reduce rural poverty.

4. Here are some of the groups in India who could benefit from these projects.

   A. Rural poor
   B. Urban poor
   C. Better off people in cities including ship owners, manufacturers, government workers, professionals, merchants
   D. Landowners and wealthy in village i.e. "Big Farmers"
   E. Indian Government

   Using the list you prepared in Question 3:
   (a) Explain how each group could benefit from the proposed British aid projects.
   (b) Who are the winners?
   (c) The majority of India's population are the rural and urban poor. Do you feel that these projects are designed to alleviate their poverty? Why?
   (d) Do you agree with the following statement? Why? "This aid package reinforces the economic and political power of the wealthy urban and rural groups. These groups become more resistant to any change that might abolish their privileges, e.g. ownership of land, ability to make profits and benefit from them. It does not generate a shift in power to the powerless i.e. landless rural poor."

5. (a) How did the villagers want to spend the British aid money?
   (b) Do you think this would be of long term benefit to the poor?
   (c) Why does their attitude change after discussion with the school master?

Continued on page 103

Overseas aid

The value of aid is in the eye of the beholder. As the donors publish the aid-giving statistics, they make great claims for their generosity. But just how free is the development assistance of our governments?

The flow of financial resources from Western to Third World countries in 1982 reached a record $82.61 billion, according to the Development Assistance Committee of the Organization for Economic Co-operation and Development.

> Foreign aid is like an artichoke. When in flower it is fairly attractive in colour. With time it becomes a prickly plant with merely a small part of it edible. To judge its real worth, the countless leaves have to be plucked one by one. Many can be discarded as worthless. Others contain the nutritive substance responsible for its reputation. Inside, deep down, one comes upon its small heart, which properly prepared and mixed with appropriate condiments provides a tasty reward for the effort that went into the patient removal of the more or less worthless leaves which hid it.
>
> *Tibor Mende, From Aid to Re-Colonization*

The USA is the biggest aid giver ($5.78 billion in 1982) but at .21% of GNP it is one of the least generous of all OECD countries.

TIED AID: $2.6 BILLION

Tied aid is only given on condition that the money is spent in the donor country, on the donor country's goods and services. It ensures that the giver doesn't have to use up foreign exchange. For the receiver, it means that they cannot shop around for the best machinery for the project. The US State Department put it clearly: 61% of all aid for International Development funds are spent directly in the USA to pay for American equipment we send abroad in the form of aid. And West Germany sees more than 70% of its official aid being spent on German products. Such 'aid' means having to pay between 20% and 50% more than the competitive world market level. **As half of all aid is tied, it reduces the aid artichoke to $18.18 billion.**

DUMPED FOOD: $2.59 BILLION

Giving away surplus food or goods is included in aid-giving budgets at official market values. But the value of unwanted food is much less. Giving it away economises on storage costs. And if the food mountain had been normally sold, the market value would have dropped dramatically. The main food dumpers are the USA (50%), EEC (20%) and Canada (10%). Taking this into account reduces real total aid by a further 10%. **Taking away this leaf leaves $15.59 billion.**

TECHNICAL HELP: $1.3 BILLION

A lot of aid is spent on paying the wages of foreign experts in the developing world. In fact a quarter of the total official aid goes on the salaries of foreign administrators, technical experts and teachers. They save a lot of their salary to send home or it is paid directly into the home bank account. There may also be generous repatriation allowances when the contract is completed. These savings, when sent back home, can account for 20% of the spending on technical help. **Another leaf falls – leaving $14.29 billion.**

PRIVATE INVESTMENT: $34 BILLION

Normal commercial practice can include investment by companies in their branches in the developing world, or international bank lending to governments in Africa, Asia or Latin America. In these cases loans or investments are made for profit not to help people. When such investment is made between Western countries it isn't called aid. Why then should it be when the investment is elsewhere? **Plucking this first leaf leaves $48.61 billion.**

EXPORT SUBSIDIES: $22.63 BILLION

Firms in the donor country go to their government's aid office to win the biggest possible subsidy before tendering for a project in the Third World. Just how much export credit will be given depends on various criteria, one of the foremost being how many jobs at home will be saved or created if the contract is won. The purpose of these export credits is to match or better foreign competition. This money is totally beyond the control of the recipient government. As George Woods, former World Bank President put it: 'If you want to give a subsidy to home industry, do so, but for goodness sake don't call it foreign aid.' **Another artichoke leaf is removed to leave $25.98 billion.**

SOFT LOANS: $5.2 BILLION

A quarter of all overseas development assistance money is only lent. It has to be repaid with interest. The element of 'aid' in a loan is the difference between commercial interest rates and repayment periods (perhaps 10% p.a. with a ten year repayment period) and the actual 'soft' rates charged to an aid-receiving country (perhaps 5% interest repayable over 50 years). Soft loans reduce the real value of official aid by 20%. **Stripping this leaf leaves $20.78 billion.**

$14.29 BILLION AID EFFECTIVELY GIVEN

Peeling away the leaves of the $82.61 billion aid artichoke reduces it to a heart of $14.29 billion. This is little more than 1% of the combined national products of the Western countries. Americans spend more than this on cigarettes alone.

Source: Development Co-operation by OECD 1983

Illustration: Hector Catterick

38

Going with an empty hand

Palpa Community Health Programme is in the centre of one of the world's poorest countries, Nepal. There have been changes in the mission's health care work over the years . . .

IN the 1960s a group of expatriate nurses and Nepali assistants from the mission-run hospital started regular mother-and-child health clinics within walking distance of the hospital. But by the beginning of the 1970s, new ideas about community health in the Third World were challenging the mission. Nurse Sigrun Mogedal put it this way: 'It hit the staff hard when we moved from the institution-orientated health care of the hospital to primary health care centred in the community.' Nurses who had been satisfied with what they were doing – running clinics, giving vaccinations and distributing medicines – were suddenly told in effect that this was not contributing to people's health.

Many nurses suffered identity crises. 'They are trained to serve all the time,' said Sigrun, 'to do things *for* people. Suddenly to be told that you must wait and respond to people as they come to you is completely against their training. For some, however, the crisis was fruitful. I remember one German nurse who went out alone to learn from the villagers. She wrote a little booklet about the concept of the empty hand. She believed you need to have empty hands so you can learn before you start to put into practice what you know.'

Illustration: Peter Wingham

The new thinking brought a radical decision in 1978: most of the mother-and-child health clinics were closed down. The clinics had not brought a fundamental change in local health. People had not been that interested. They weren't prepared to clean and maintain the buildings. Mothers came to get the 'magic medicine' only when their children were ill. And when their minds were on the sick child they were unlikely to take in advice about hygiene. Often sick children returned with the same complaint.

The new approach was marked by sending two experienced Nepalese staff to a couple of villages. They sat in the teashops and chatted, talked to different groups to find out what the people themselves thought their needs were. Health came comparatively low on the villagers' list of priorities. Top of that list was the welfare of their farm animals and water for irrigation and the household. The fact that people are more ready to spend money on their buffalo than their children might be hard for Westerners to accept. But the buffalo is vital for the long-term survival of all the family. It helps the household directly, through its milk and manure, and the bigger harvest it produces. And it can be rented out for ploughing too.

These benefits are essential because over half the area's families have loans, with interest rates of 20 per cent to 30 per cent to maintain. One local man was so deep in debt that the Brahmin moneylender refused any further credit. The unfortunate debtor then had a choice: become a fugitive or stay as the Brahmin's slave. He chose slavery and now lives with the Brahmin's animals and works for his food.

In a country where 61 per cent of the people are below the absolute poverty level, being rich means having enough food the whole year. Tough decisions have to be made in the mountainous villages. Outsiders can help, but only if they learn before they act.

Abbreviated from 'Good Aid' by Millwood & Gezelius

Source: *New Internationalist Calendar*, August 1987
By Bill Coppinger, Broadford High School, Melbourne

Student Exercises

1. In relation to the passage, "Going with an Empty Hand":
   (a) Describe the type of health care that has been provided for the Nepalese people up until the time this article was written.
   (b) Who are the people who have been providing this health care?
   (c) Explain why "many nurses suffered identity crises" when they were told they were not contributing to people's health in the long term?
   (d) Explain (in your own words) why the old style clinics did not bring change in the local villagers health.

2. Using the chart that is set out below, compare the differences between the old and new systems of health care.

Old System	New System
Teams of trained medical staff	
Hospital supplied health clinics	
Traditional vaccination methods (line-up for needle)	
Distribution of medicine and pamphlets from a central education centre	

3. Using the quotations below as a guide, explain what is meant by the phrase "going with an empty hand".
   - "In a country where 61% of the people are below the absolute poverty level, being rich means having enough food the whole year."
   - "Tough decisions have to be made in the mountainous villages. Outsiders can help, but only if they learn before the act."

4. From what you have read, who do you think wrote the passage? Why?

5. (a) Explain how each of the following groups might differ over the new-style health scheme.
   (b) Which groups might favour the scheme?
   (c) Which groups might reject it?

Continued on page 104

LANDMARKS FOR CHANGE

Guidelines on small-scale aid projects in Nepal illuminate bigger issues. But there are always afterthoughts.

Take your time and persevere

Outsiders will have a great effect on the life of a village community. Foreign helpers should take their time before starting or helping any activities, for they will be significantly altering people's lives. Initial enthusiasm should be restrained. When problems occur withdrawal might seem the cleanest option. But the local people have to live with the mess, and outsiders have a responsibility to help them.

AFTERTHOUGHT: Yet local peasants are often cautious and unimaginative. They won't waste time on untried theories. So they might need outsiders to act fast, grow wonderful tomatoes and prove that it is possible before locals are willing to start a vegetable garden on their own.

Involve the people

Good aid is determined more by *how* you do a project than *what* you do. Genuine participation means listening to local people, letting them decide what they want. Outsiders can provide information and encourage the discussion. But ultimately the people have to feel the project is valuable, something they will work for and maintain once the outside help is gone.

AFTERTHOUGHT: Genuine democracy appeals to Westerners. But elsewhere colonial and contemporary circumstances encourage passivity. People who stick out their necks can have them chopped off. Do foreigners in a position of safety have the right to encourage such risky behaviour?

Aidworkers' pictures of themselves

Albert Schweitzer *. . . paternal dispenser of wisdom and science.* **Santa Claus** *. . . providing gifts.* **The good pastor** *. . . pulling the undisciplined herd together.*

All these ideas cast the aidworker as star, the local beneficiaries as supporting cast. It all makes genuine participation impossible.

Assess the result

Are things better off for the people you have tried to help than they were before the project began? If not, then the project is no good. Beware of impressionistic evaluations. Instead try and find real evidence – more people able to read and write, for instance, or less indebtedness.

AFTERTHOUGHT: Assessments based on figures are difficult because the real world of a Nepali village is different from laboratory conditions. Statistics must be quoted with care. For instance, harvests might slump despite a worthwhile new farming project, just because of bad weather.

Attack the causes not the symptoms of poverty

It is less effective to treat the casualties of a violent system than stop the violence. Hospitals help fewer people's health than rural clinics. Such clinics in turn do less to prevent illness than a clean water project.

AFTERTHOUGHT: Where do you stop? At least you can see people cured by the medical facilities, whereas clean water is much more vague. And isn't dirty water just another symptom of an uncaring government, or a cruel world trading system?

Aid the powerless, not the powerful

Make sure the project helps the women and children particularly, or the weaker groups within the community. Apparently innocuous schemes can have harmful effects. Modern farming technology, such as tractors or 'miracle' seeds, is likely to be more helpful to larger farmers who can use increased income to buy out the smaller peasants. Hospitals will be most useful to those in towns who live near them. Schools will benefit the children of parents rich enough not to need their offspring to work in the fields.

AFTERTHOUGHT: Yet singling out the poorest can be impossible. To try and install a clean water system or electricity and limit the use to the villagers who are worst-off, could provoke violence both against the beneficiaries and the new facility.

Illustration: Pete Wingfield

All material based on 'Good Aid – A Study of Quality in Small Projects' by D Millwood and H Gezelius published by Swedish International Development Authority

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Partnership

A textile designer with an alternative trading group determined to bring dignity, work and income to the dispossessed of India, shares her experience.

WHEN I was 12 years old and busy making cuddly toys for my schoolfriends, people told me 'You're going to be a fashion designer'. My interest in clothes was negligible then and I retorted: 'No, I'm going to be a doctor in Bangladesh.' I carried on sewing though, with the scraps of fabrics people brought me. Later, much later, I found a job with Traidcraft, an alternative trading organization importing goods to the UK from community groups in developing countries. By going directly to village people such trading cuts out the oppressive middlemen, bringing a better return to the real producers with handskills to offer. My job was to offer them some design and technical expertise in return.

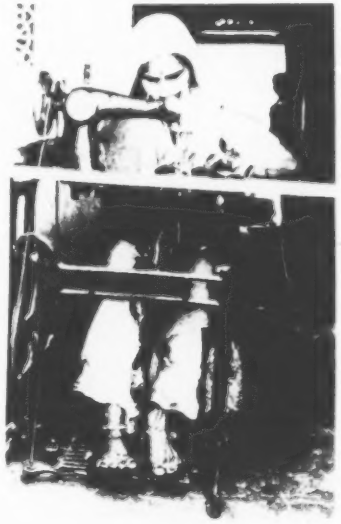
India was my destination. I had heard about a group of handicapped women who were hemming teatowels. A rickshaw took me past the godowns spilling their wares onto the streets, past cows wandering through the jostling crowds to a dark hall. Inside were two rows of women behind sewing machines, shy faces glowing with interest.

Disabilities such as deafness or a crooked ankle often make you unmarriageable in India and these women had grown up with the knowledge that they were a burden on their families. Then a local charity had trained them in tailoring skills. I looked at their work and saw the erratic sewing and the puckered stitching. But the sewing was only bad, they told me, because of the pittance they were paid. Simply making enough to live meant rushing and there was never the money nor the time to service the machines. They were locked at the bottom of the pile, chained to producing ever poorer goods for less reward.

A month later I was back. With flowers plaited in my hair as a token of friendship I laid out my pattern on the table. We plodded through the cutting-out with step-by-step precision, for they all had to be exactly the same for the export consignment. I took some fabric to the nearest empty sewing machine and sat down. As the throng gathered round I treadled with feet and guided with fingers, much as I had at home.

On my last visit to their workshop a few months later, I was stunned. Piles of clothes were neatly packed up and ready to go. The positive results of our work together were everywhere. There were measuring charts all over the walls, the tape measure was being used all the time, every single seam was perfect. In the last three months the women had earned more than in the previous twelve. The pride and quality of their work could only be imagined. The room was not now a sea of faces but a group of familiar people with whom I had worked – together we had moved forward. If only it could lead to more.

Abigail Garner



Source: *New Internationalist Calendar*, August 1989
By Toh Swee-Hin, University of New England, Armidale.

Student Exercises

1. Read the passage, "Partners", and discuss the following questions in groups:
   (a) What organisation did Abigail Garner, the author of the passage, join?
   (b) What is the vision of this organisation?
   (c) Who did Abigail visit in India?
   (d) What is the social status of the Indian women visited by Abigail? Why are they disadvantaged?
   (e) Describe the working conditions of the Indian women. How do you feel about those conditions?
   (f) How did Abigail try to help the women?

2. Write a list of words and phrases which describes the everyday life of one of the Indian women sewers whom Abigail visited. Put yourself in the "shoes" of this Indian woman and show how she might be feeling about her handicap in her personal life and her work as a sewer of tea towels.

3. (a) What do you think are the reasons for the nature of the working conditions faced by the Indian women?
   (b) Are there Australian workers, women or men, who face similar working conditions?
   (c) If the Indian women were not handicapped, might their working conditions have been different?

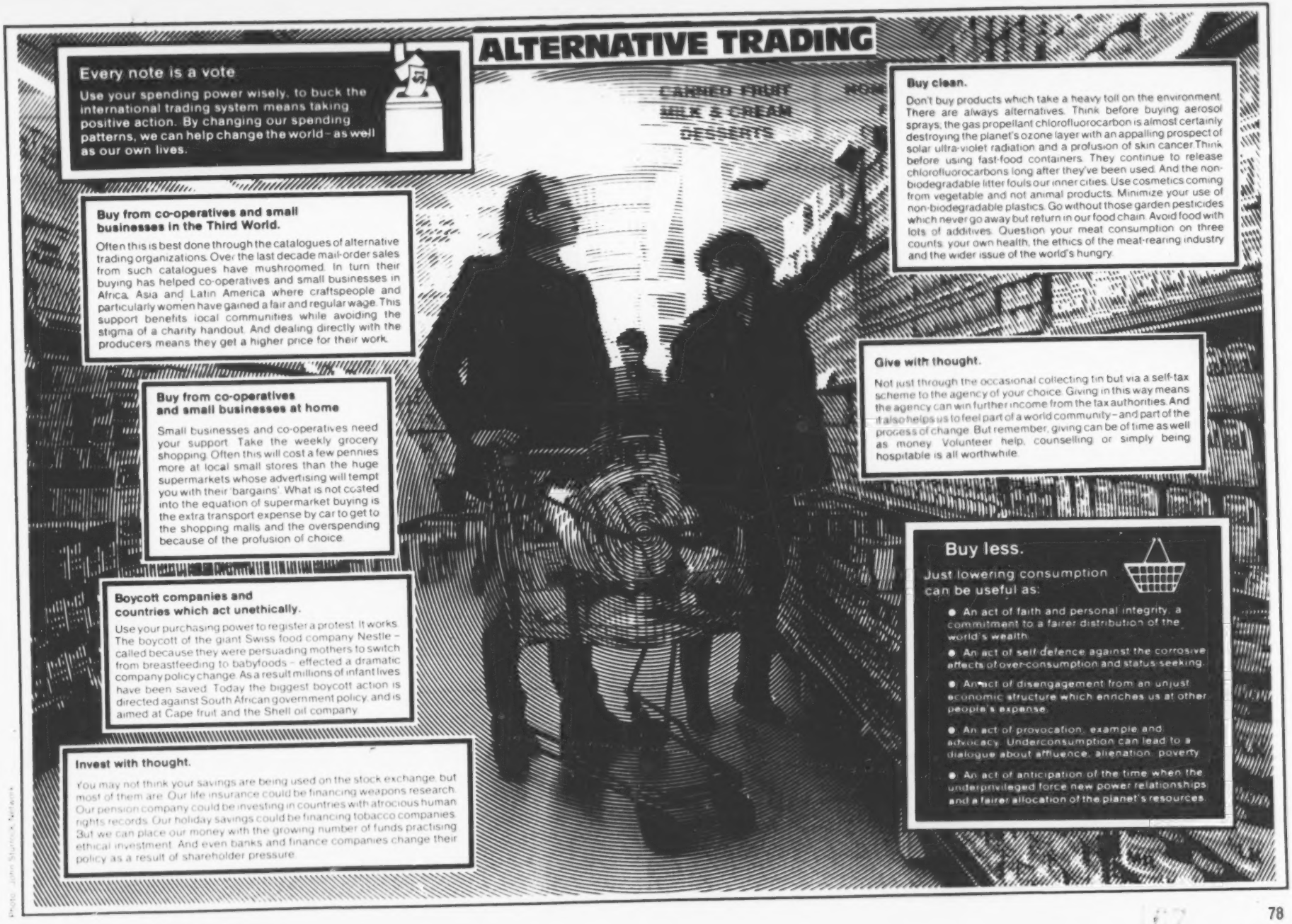
4. (a) How successful was Abigail's action in assisting the Indian women?
   (b) What do the results tell you about the attitudes and spirit of the women?
   (c) Are you surprised at the results? Why?

5. (a) In what ways do you think Abigail gained from her experience of cooperating with the Indian women? What values did Abigail hold when she went to India and how did she demonstrate those values?
   (b) How do you feel about these values
   (c) Does Abigail's conduct reflect "pity", "charity" or "solidarity"?

6. Study the diagram titled "Alternative Trading".
   (a) Define alternative trading in one or two sentences.
   (b) What can be achieved through alternative trading?
   (c) List the various actions which individual Australians can take to promote alternative trading.
   (d) Have you or members of your family taken any actions in your every day lives? Would you consider becoming involved? Why?
   (e) Rank the five white boxes in order of how easy it would be for you to take action? Why?

Continued on page 105

ALTERNATIVE TRADING



Every note is a vote

Use your spending power wisely, to buck the international trading system means taking positive action. By changing our spending patterns, we can help change the world – as well as our own lives.

Buy from co-operatives and small businesses in the Third World.

Often this is best done through the catalogues of alternative trading organizations. Over the last decade mail-order sales from such catalogues have mushroomed. In turn their buying has helped co-operatives and small businesses in Africa, Asia and Latin America where craftspeople and particularly women have gained a fair and regular wage. This support benefits local communities while avoiding the stigma of a charity handout. And dealing directly with the producers means they get a higher price for their work.

Buy from co-operatives and small businesses at home

Small businesses and co-operatives need your support. Take the weekly grocery shopping. Often this will cost a few pennies more at local small stores than the huge supermarkets whose advertising will tempt you with their 'bargains'. What is not costed into the equation of supermarket buying is the extra transport expense by car to get to the shopping malls and the overspending because of the profusion of choice.

Boycott companies and countries which act unethically.

Use your purchasing power to register a protest. It works. The boycott of the giant Swiss food company Nestle – called because they were persuading mothers to switch from breastfeeding to babyfoods – effected a dramatic company policy change. As a result millions of infant lives have been saved. Today the biggest boycott action is directed against South African government policy, and is aimed at Cape fruit and the Shell oil company.

Invest with thought.

You may not think your savings are being used on the stock exchange, but most of them are. Our life insurance could be financing weapons research. Our pension company could be investing in countries with atrocious human rights records. Our holiday savings could be financing tobacco companies. But we can place our money with the growing number of funds practising ethical investment. And even banks and finance companies change their policy as a result of shareholder pressure.

Buy clean.

Don't buy products which take a heavy toll on the environment. There are always alternatives. Think before buying aerosol sprays, the gas propellant chlorofluorocarbon is almost certainly destroying the planet's ozone layer with an appalling prospect of solar ultra-violet radiation and a profusion of skin cancer. Think before using fast-food containers. They continue to release chlorofluorocarbons long after they've been used. And the non-biodegradable litter fouls our inner cities. Use cosmetics coming from vegetable and not animal products. Minimize your use of non-biodegradable plastics. Go without those garden pesticides which never go away but return in our food chain. Avoid food with lots of additives. Question your meat consumption on three counts: your own health, the ethics of the meat-rearing industry and the wider issue of the world's hungry.

Give with thought.

Not just through the occasional collecting tin but via a self-tax scheme to the agency of your choice. Giving in this way means the agency can win further income from the tax authorities. And it also helps us to feel part of a world community – and part of the process of change. But remember, giving can be of time as well as money. Volunteer help, counselling or simply being hospitable is all worthwhile.

Buy less.

Just lowering consumption can be useful as:

- An act of faith and personal integrity, a commitment to a fairer distribution of the world's wealth.
- An act of self-defence against the corrosive effects of over-consumption and status-seeking.
- An act of disengagement from an unjust economic structure which enriches us at other people's expense.
- An act of provocation, example and advocacy. Underconsumption can lead to a dialogue about affluence, alienation, poverty.
- An act of anticipation of the time when the underprivileged force new power relationships and a fairer allocation of the planet's resources.

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In the year 2000

My ideal world would have no nuclear arms. No bombs, ships, tanks and planes. There would no longer be the threat of the bomb to massacre the innocent wildlife as well as ourselves. If by chance a war did brew up, it would be fought with constructive words instead of weaponry. Weaponry that would cause holocaust and sleepless nights.

With the saved money I would spend it on clothing and feeding our public and helping Third World countries fend for themselves. I would help them to grow crops and sow the land quickly with machines. I would help them to dress wounds, so that they too can enjoy life as we do.

It would be a much better place if everyone was kind and considerate to others, no matter what their colour or religion. I'm not saying that everyone should be a Christian, Jew or a Methodist. I'm just saying they should respect other religions, not mock them or be aggressive.

Anna Lindsop, aged 14

In the year 2000 I would like to see Britain and the rest of the world in harmony. If the world was at peace then the majority of the people would be happy. I would not want a communist state but I would want most people given the same amount of money in their pay packet. At least enough for them to live comfortably and have a small treat every now and then. Somehow the world's money would have been divided out among all the countries so that poor countries wouldn't exist any more . . . I can't really believe that people who want to argue with hate in their voices really exist.

Graham Gomez, aged 12

Bombs are being made as easily as one makes a cup of tea or coffee. I would love all the world to be at peace. Maybe in the year 2000 a miracle might be performed and the problem of unemployment might be solved as well as crime and vandalism.

We are tomorrow's generation. We will make it whatever it is. If it is horrible it will be our fault. Will a matter of years change everything?

Samantha Corrigan, aged 13

A place which will be peaceful; where my children and their children in turn may live in happiness and prosperity. No guns, tanks or other instruments of war. No living under the constant threat of a nuclear holocaust, just a caring society. Caucasoid, Mongoloid and Negroid all working together in harmony and having equal opportunities to advance through life. No unemployment and a good healthy standard of living for all.

A clean, healthy environment: less noise, no pollution, no lead in petrol which can cause brain damage in young children, new public baths, larger parks, decent housing and protection for wildlife in danger.

But my main desire is to see people less materialistic, less selfish, less violent and more loving than they are now.

Anthony Twist, aged 14

From an essay competition set by **The Times** *of London with the title 'The world I would like to see in the year 2000.'*

Source: *New Internationalist Calendar*, November 1987
By Don Gobbett, South Australian College of Advanced Education, Adelaide.

Student Exercises

1. Read the comments of the four British students in "The world I would like to see in the year 2000", and answer the following questions:
   (a) Make a list of 3 or 4 key words or phrases from each one.
   (b) Rewrite your list dividing them into two columns headed: "Peace" and "Absence of Peace"
   (c) Add any other words to give an Australian perspective.

2. How are the following related to peace?
   (a) Countries fending for themselves
   (b) Unemployment
   (c) Standard of living
   (d) A clean environment.

3. What experiences might the four writers have had to lead them to write their visions as they have?

4. What vision might a teenager in a Third World country have for the year 2000? In what ways might it differ from the British students' or from yours?

5. (a) How does the article measure "quality of weapons" and "quality of life"?
   (b) What additional or alternative measures would you use?

6. For each of the 10 aspects of quality of weapons and life, draw a bar graph showing the changes from 1945 to 1985.

7. (a) Which of the 5 measures of quality of life are linked, in your opinion, with human rights?
   (b) Find a copy of the United Nations Declaration of Human Rights and compare the measures with those.
   (c) Note any human rights you consider are threatened or denied to citizens of (i) the USA, (ii) USSR, (iii) the Third World, and (iv) Australia.

8. Adolpho Perez Esquivel's comment reminds us of both "physical" and "structural violence". List your own examples of each.

9. There is a popular slogan which says "If you want peace, work for justice".
   (a) What is the link between peace and justice?
   (b) What could you do to promote peace by working for justice in your school, local community or the world at large?

Continued on page 106

PEACE ON EARTH

Since 1945 there have been spectacular advances in military technology. By comparison, improvements in global living conditions have been far slower. Forty-two years after the Charter of the United Nations agreed that all people should live free from fear and want, between a quarter and a third of the world's people remain ill-housed, ill-clad and ill-fed.

- In a world spending $800 billion a year for military programs, one adult in three cannot read, one in four is hungry.
- In the Third World military spending has increased fivefold since 1960 and the number of countries ruled by the military has grown from 22 to 57.
- It costs $590,000 a day to operate one aircraft carrier, less than one per cent of this would save the 14,000 children who die of hunger and hunger-related disease in Africa every day.

> *Usually we speak of violence only when it has reached an extreme. But it is also violence when children are dying of malnutrition, when there is no freedom of unions, when there is not enough housing, not enough health care.*
>
> ADOLPHO PEREZ ESQUIVEL, Argentina

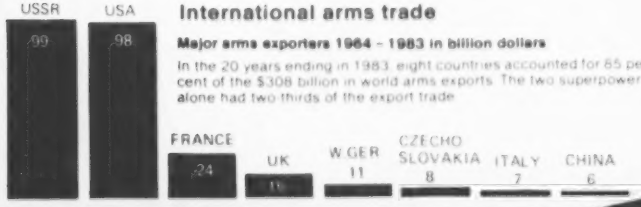
Relative change in quality of weapons and life 1945 – 1985

Quality of weapons	1945	● 1985	Quality of life			
Range – missile from submarine		262x	**Suffrage** – legal right to vote			5x
torpedo	5.7 miles		number of adults		580 million	
● sea-launched cruise missile		1,500 miles	● number of adults		2,700 million	
Area of destruction		250x	**Education** – school enrolment			4x
artillery shell	2,000 sq. meters		number of children 5–14		210 million	
● multiple launcher rocket	500,000 sq. meters		● number of children 5–14		810 million	
Payload – destructive potential of single bomber		199x	**Income** – Third World			2x
B-29	40,000 lbs. of explosives		GNP per capita		$460 per year	
● B-1B	7,960,000 lbs. of explosives		● GNP per capita		$890 per year	
Speed – intercontinental delivery		42x	**Literacy** – ability to read and write			2x
B-29	360 miles per hour		number of adults, 15 and over		880 million	
● MX ICBM	15,000 miles per hour		● number of adults, 15 and over		1,750 million	
Firepower – machine gun		24x	**Longevity** – life expectancy at birth			0.3x
.30 calibre Browning	250 rpm		life expectancy at birth		47 years	
● 7.62mm Minigun	6,000 rpm		● life expectancy at birth		61 years	

International arms trade

Major arms exporters 1964 – 1983 in billion dollars

In the 20 years ending in 1983, eight countries accounted for 85 per cent of the $308 billion in world arms exports. The two superpowers alone had two thirds of the export trade.



Star wars

Star Wars, originally thought to be a defence to stop all nuclear missiles, is beginning to lose some of its sparkle. Close scientific investigation has found technical faults. And critics see the system as a provocation, stimulating the arms race and the chance of a nuclear war.

ONLY A PARTIAL SHIELD: The defence only works against high-flying missiles. It provides no protection against low-altitude bombers, contour-hugging cruise missiles or nuclear explosives arriving by suitcase.

ONLY SEMI-EFFECTIVE: The system might not be more than 50 per cent effective against ballistic missiles according to scientists in favour of Star Wars. Critics estimate 10 per cent effectiveness. But if only one per cent of missiles got through, 100 US cities would be destroyed with up to 50 million people killed immediately.

NEW ENCOURAGEMENT TO ARMS RACE: As the costs of building more missiles are less than starting an alternative Star Wars system, the Russians are likely to opt for additional weapons instead. Of course this will then prompt the US to match that arms build-up during the decades when Star Wars is under development.

GREATER RISK OF FIRST STRIKES: In any crisis a partially effective defence system is an incentive to the US to strike first and wipe out the USSR's missiles. The Russians too have an incentive to strike first because of the strengthened defence of the US, and the fear that such a defence was designed to support a first strike.

THREAT TO INTERNATIONAL AGREEMENT: The defence system includes the deployment of space-based missiles. This violates the 1972 Anti-Ballistic Missiles treaty, and may encourage the USSR to breach other arms treaties and to seek breakthroughs of their own in the technology of destruction.

CRAZY COSTS: The Pentagon estimated the five-year research costs at $30 billion. Overall estimates by independent authorities range from $50 billion to $100 billion.

Source: World Military and Social Expenditures 1985, Ruth Leger Sivard

1. *Facts of Life: Spaceship Earth* continued

4. Use data in the box called "Three decades of progress" to construct bar graphs to illustrate the changes in:
   (a) income,
   (b) health, and
   (c) education over the thirty year period (1950-1980).

5. (a) Explain what trends you observe in your graphs, why they could be occurring, and how they could be changed if necessary.
   (b) What is meant by GNP per person?
   (c) What is a non-market country?
   (d) To what sorts of countries is the majority of income and expenditure on education and health going? What is the significance of this?
   (e) Why is this so?
   (f) Where is the least amount going? Why?
   (g) How do you think that the distribution of the world's resources could be made more equitable?

6. Study the box called "A world divided".
   (a) Use the information to construct a table that compares the data for the developing world with the relevant data for the developed world. (You can calculate the data for the developed world by subtracting the percentage for the developing world from 100%.)
   (b) Do you think that the pattern revealed in your table is fair? Why?
   (c) How do some people gain from the inequalities in living conditions around the world?
   (d) To what extent do you benefit from these inequalities? How?

7. Someone once said: "In today's world, it is not who your parents are but where you were born that counts".
   (a) What does this statement mean?
   (b) Do you agree with it? Why?

8. Invite your Federal Member of Parliament to your class to explain what Australia should be doing to help make the world fair for everyone.

9. Write to a development agency to ask how you can become involved in helping solve some of the inequalities in the world.

2. *The Global Economic System: The Modern Parable* continued

7. If you were the factory manager what would you value as being important? Rank the above statements using the number ranking as outlined in Question 6.

8. On the line below, place an **X** to show how much power over their working conditions people who worked in the factory had.

   No Power ——————————————————— Total Power

9. Place a **Z** on the above line to indicate how much power over their working conditions people in your local area have.

10. In small groups discuss the reasons why there are differences between **X** and **Z** on your lines.

11. The statistics in the large diagram show variations in the quality of life between developing and developed countries. By looking at the statistics categorise the statistics which refer to:
   (a) Education
   (b) Health
   (c) Employment
   (d) Housing

12. In groups of 4-6 discuss your own images of developing and developed countries.

13. From the statistics, "The casualties....," indicate whether the following statements are:

   T True - the statistics support the statement
   F False - the statistics do not support the statement
   I Inferred - it can be inferred from the statistics

   - The majority of the world's population are in the developing world.
   - All the people in the world can read and write.
   - Most of the child deaths in the world occur in the developed world.
   - All children attend primary school.
   - The majority of children who suffer malnutrition in the world are in developing countries.
   - Most of the infant deaths occur in the developing countries.
   - In developed countries there is access to safe water.

3. *Global Food Connections: One Link in the Chain* continued

Stage 4: Retailers

(i) Who dominates the world's markets?

(j) What type of retailer is under threat of disappearing?

Stage 5: Consumers

(k) What control do consumers have over what is on our supermarket shelf?

(l) Look at the images of the consumers. According to this, who are the main consumer. Do you agree?

3. How powerful are the following groups in influencing what food is grown and sold. Scorethem 1 (most powerful in influencing what is grown and sold) to 5 (least powerful in influencing what is grown and sold). Be able to explain why you have ranked them where you have.
   - Agribusiness suppliers
   - Large scale western farmers
   - Small scale western farmers
   - Agribusiness middlemen
   - Small food retailers
   - Consumers
   - Big retailers
   - Third world elites
   - Third world farmers

4. The Malay family described in the story fits into the world food production process. What level of power and influence do they have over what food is grown and sold? Why?

5. What would happen to most of the food that this family produces.

6. According to the "Global Food Connections" diagram, what economic pressures are these types of farmers under?

7. In what ways might the "Third World Elites" group be adding to food shortages amongst ordinary people in the Third World? What are they asking them to grow instead?

8. Would the arrival of a "green revolution" affect the amount of Third World land used for local food needs?

9. If a village meeting was held to decide whether to join in the "green revolution", would you be for or against it? What points would you make to the meeting?

10. Many products that we currently buy are produced in the Third World on plantations or as cash crops on farmers' land.
    (a) Survey the shelves of your local supermarket to find out how many products come from Third World countries.
    (b) Prepare a series of graphs/maps to show where the various products come from. Describe your results.
    (c) Following the results of your survey, discuss these questions:
        (i) If we buy cash crop products from Third World countries, who is likely to get most of the money. Who are we likely to be harming?
        (ii) In your opinion, should we buy products from Third World countries? Why?
        (iii) Would some products be better to support than others? Why?
    (d) Prepare a report (to another class or to a school assembly) or a poster to explain of how our consumption habits affect people in the Third World.

4. *Barriers to Independence: Why Don't They Help Themselves?* continued

(b) How did they acquire the rest of the goods they needed?
(c) Why are efforts being made in Senegal to devote more land to rice, cotton, sugar and market-gardening?

8. (a) Suggest reasons for commodity price fluctuations.
(b) Why do the Third World commodity-producing countries not set an export price and refuse to sell below it?

9. In the long term which country's economic base is more vulnerable - Zambia or Mauritius? Why?

10. Find out how the Arab OPEC countries can afford to give such a high percentage of their GNP as foreign aid.

11 Some aid is "tied" because it must be used to purchase donor countries' goods. Find out what other conditions are sometimes attached to foreign aid.

12. Find out if and how "Third World poverty" differs from poverty in Australia?

13 Australia is heavily dependent on a small range of commodity exports such as wool and wheat, but it is not usually classified as a Third World country. Can you explain this?

14. Appoint the members of your class as the government of an imaginary Third World country whose foreign debt repayments absorb 70 cents of every dollar earned from exports. Debate a proposal from the Minister of Finance to withhold debt repayments until the economy of the country has achieved a level of advanced development.

5. *International Trade: Tricks of the Trade* continued

8. The box with the "No Entry" sign, describes the trade barriers set up by Western nations against imports from the Third World. Explain why these barriers have been set up, using information in the "Tricks of the Trade" article.

9. In the passage, "Tricks of the Trade", the Western Expert says "Things haven't quite worked out as we expected". Using the ideas in the boxes of information, list what went wrong.

10. Imagine you are Mustapha (see "Tricks of the Trade"). You have been asked to write one page for an article in your country's newspaper explaining why the new shoe factory had to close down. List the key points you would want to make.

11. Imagine you are the Western Expert. You can see that your old suggestion have not worked. What course of development would you suggest the Third World nations follow now?

12. Imagine you are the President of a large Western bank. You have given loans to Third World nations, but it seems as though they will not be able to repay it. What are some of the ways you could resolve the situation?

13. In the small box in the bottom right hand corner, four suggestions are made of ways poor countries could survive their present crisis. Before examining these options, explain the following terms:
(a) OPEC
(b) Cartel
(c) Commodities
(d) The South
(e) Import substitution.

14. For each of the four options suggested, write down
(a) a benefit, and
(b) a problem of adopting the policy.

15. How would these policies help or hinder wealthy western nations if they were adopted?

6. *High Risks: Running the Gauntlet* continued

5. Work in groups of 3 or 4 to write a three scene play based on the article and featuring Catarina, her husband Guillermo, her previous employer and any other characters you consider should make an appearance. The scenes could be:
   - Catarina and Guillermo's house in the village
   - The village scene after the earthquake
   - Catarina in her interview for her new job.

6. Complete the "Poverty and Development" survey sheet. When you have finished, hand this sheet to your teacher. (**Note to teachers:** Collate the responses on the Likert Scale by totalling the ticks in each column for each statement. Convert these figures to percentages. Administer the scale again at the end of the unit. Compare the results in evaluating the unit.)

7. Your teacher will lead you through a "Brainstorming" exercise to list the causes of poverty and indebtedness in Third World countries.
   (a) Group these causes under the headings "Physical", "Social/cultural", "Economic", "Political" and "Historical".
   (b) In groups compare your lists and develop an hypothesis for the causes of poverty and indebtedness in Third World countries. Consider what evidence you would need to support your group's hypothesis.
   (c) Write your group's hypothesis on butcher's paper and stick it up on the classroom wall.

8. Refer to the information in the 16 boxes in the game of "High Risks". This might help clarify some of your views on development in Question 6 and provide evidence for your hypothesis in Question 7(b). But first, play the game, in groups of 3 or 4 students.
   (a) At each "box" discuss the implications of the factor and likely effects on the poor in Third world countries.
   (b) What difficulties did you encounter playing the game?
   (c) What conclusion can you draw about the problems of development in Third World countries?

9. Still in groups, study the four circled points. Discuss the links between these four circles by considering the questions below:
   (a) Which circle provides the starting point for the links?
   (b) Which is the next circle you would proceed to and what is the connection between these two points?
   (c) Which is the third possible link? How would this factor result from the previous one?
   (d) Which two "boxes" describe situations that could substantiate the link between the second and third circles?
   (e) The remaining circle provides an insight into the government's response to the situation in the third circle. What is this response?
   (f) Which two "boxes" support your conclusion about this response?
   (g) Is there a way to break the links? At which point would you suggest making the break and what would you propose?

10. Study the 16 "boxes" or factors again.
    (a) Identify the factors which have a foreign origin.
    (b) Identify the factors which are a response by Third World governments to situations caused by foreign involvement.
    (c) Identify the factors which have a purely local origin.
    (d) Make three lists of these categories of factors.
    (e) What conclusion can you draw about the causes of Third World poverty and indebtedness?
    (f) Compare this with your group's hypothesis in Question 7 (b).
    (g) Analyse the reasons for your original perception of the problem.

11. Another way of looking at the 16 boxes is to consider these factors as one approach to solving problems of development.
    (a) What is the development strategy portrayed in this game?
    (b) Does the article suggest that this strategy has been successful?
    (c) What impressions does this game give you regarding development problems facing Third World countries?
    (d) Would these impressions apply to all Third World countries? Why?

12. If you were in charge of a Third World country, what strategy would you implement?
    (a) In groups of 3 or 4, discuss and list the criteria for development of your country, i.e. consider who should "development" be for and what needs "developing"?
    (b) Outline a strategy for autonomous development, i.e. development without foreign intervention, based on independent decisions and on your terms.
    (c) Present your group's strategy to the rest of the class for critical analysis.

13. Repeat the survey Question 3. Discuss how the your views and those of the rest of your class may have changed.

14. Research the functions of the IMF and its activities in debt-financing of Third World countries.

15. Find out about the global spread of transnational corporations such as Coca-Cola.

16. Debate the topic, "Revolutions are the only solution to problems of development".

Continued on page 85

"Poverty and Development" Survey Sheet

Circle the number which best represents your opinion of each of the following:

Scale:
1 - Strongly Agree
2 - Agree
3 - Undecided
4 - Disagree
5 - Strongly disagree

Statements

1. People like Catarina are poor because they won't help themselves 1 2 3 4 5
2. Catarina's husband ill-treated her because he is a cad. 1 2 3 4 5
3. Catarina should have tried to get better jobs. 1 2 3 4 5
4. Catarina's employer should not have asked for his money back. 1 2 3 4 5
5. It was only proper that Catarina repay the loan to her employer. 1 2 3 4 5
6. All loans and debts should be repaid. 1 2 3 4 5
7. Third World countries like Mexico are in debt because they are unlucky to be in disaster-prone areas. 1 2 3 4 5
8. Small local factories which are inefficient should close down. 1 2 3 4 5
9. Foreign investment is good - large corporations provide employment for the local people. 1 2 3 4 5
10. Foreign aid and loans provide money for development in the Third World. 1 2 3 4 5
11. If Mexico didn't have such a large population, it wouldn't owe so much to the IMF. 1 2 3 4 5
12. It was a good thing that the IMF gave Mexico a further loan after the earthquake. 1 2 3 4 5
13. The loan should have been used to develop industry for export goods. 1 2 3 4 5
14. Third World countries can solve their own problems without foreign intervention. 1 2 3 4 5

Comments:

7. *Work-The Informal Sector: Barefoot Business* continued

4. Once the cartoons, sketches or written passages have been completed the group should arrange these on a large sheet of paper to show a collage of stories that relate to informal sector workers in the Third World. Choose a suitable title and border for your display.

5. Working individually again, study the photograph and then write down as many questions as possible about what is happening in the photograph, things you don't understand or, things you would like to know more about (e.g. In what country is the photo taken? Or why is the cart-puller barefooted?)

6. Once your questions are completed, reform your group, discuss your questions, and write the best five questions on a chart.

7. Compare and display all your charts around the classroom. Make up a large class banner or title to describe to class visitors what the display is about.

8. A similar activity could be undertaken using the drawings under the paragraphs, describing what the drawings show, both through statements and questions. (e.g. the bus is overloaded because people migrating from the countryside to the city are bringing with them everything that they own.)

9. Write down your ideas on the following two statements in preparation for a class discussion.
   (a) Many children in Third World cities suffer because they have very little, or no formal education and may children in Australia suffer because they have very little or no informal education (i.e. learning to be street wise).
   (b) Women factory workers in the formal sector in Australia and the Third World are in no better position than the "non-unionized" out workers in the Third World.

8. *Population: An Athenian Fable* continued

5. Study the map showing "Birth and Death" by country and compare this with the table "Countries with largest population".
   (a) Which six countries appear to have the largest populations and also the largest number of babies born in them for the years 1975-1980?
   (b) Which continent has the highest rate of death for children in the first year of life?
   (c) What reasons could account for such high death rates in infants in those countries?
   (d) Use graph paper and draw bar graphs for each of the 20 countries with the Largest Population. Include Australia's present population (16 million).

6. The United Nations states that the world's population growth is slowing down. Refer to the illustration of the dolls.
   (a) What was the world's population in 1985 and what is it predicted to be in 2110?
   (b) Study the two tables under "Top of the Table". Where will the major increases in population occur in the next century and why?
   (c) What will encourage lower rates of population increase most effectively?
   (d) Why are some people such as environmentalists, politicians and leaders in Third World countries concerned about large and rapid increases in the world's population?

7. Imagine you live on a small island in the Pacific Ocean. The population has now grown to such a size that local resources cannot supply enough food. What measures can you take as the supreme chief to prevent famine and death? Chart the chain of possible consequences for two of your decisions.

8. Study the five boxes under the title "Why People in the Third World have large families":
   (a) In five similar boxes headed "Why most people in Australia have small families" draw silhouettes illustrating corresponding conditions in Australia e.g. instead of "High infants mortality" draw a silhouette for "Low infant mortality".
   (b) Ask your grandparents or an elderly neighbour about family life in Australia early this century. Use the points made in the five boxes "Why people in the Third World have large families" as a guide for your interviews about Australian families early this century.

9. Read "The Way Forward":
   (a) Population growth slowed down in the rich countries of the world as the quality of people's lives improved. This happened before reliable contraception became available. Why then, is it claimed that "making contraception available (in Third World countries) is important but it is not a complete solution?
   (b) A number of the world's wealthy countries including the E.E.C., U.S.A. and Japan have protectionist trade policies which disadvantage Third World countries. Many such countries are increasingly in debt to financial institutions in the West. How can "the world's resources be shared more equitably"? What resources are we talking about anyway?

9. *The Family: The Shrinking Circle* continued

10. Using the table headed "Third World Goes Nuclear", compare the figures for rural and urban areas in Bangladesh and Jordan. Suggest reasons for these differences and similarities.

11. Land ownership is very important to the people mentioned in these resources. Draw up a table to show
    (a) Who owns the land
    (b) Why it it important to them
    (c) Any changes to their life styles connected to land ownership.

12. You will, at some stage in your life, have to decide if you want to have children. Write down a list of factors you would consider before making that decision.

13. (a) Children and marriage have traditionally been closely linked in Western society. Look at the statistics in "Removing the Ring" and "Refusing the Ring" and note the trend in countries like Denmark and Sweden.
    (b) Do you think the trend for Australia will accelerate further? Give reasons for your answer.

14. Women in developing countries are also changing their ideas on the ideal size of families. These may be motivated by economic conditions. List 3 economic factors which may be linked to family size.

15. Choose one developing country and one Western country mentioned in the diagram and research:
    (a) The most recent population figures
    (b) The birth rate, mortality rate and life expectancy in these countries
    (c) One or two indicators of economic wealth
    (d) The ratio is between doctors and patients.

16. How do these figures give you a better understanding of the lives of people like Julie and Njaya? What else would you need to know before you felt you understood their lifestyles? Where would you find that information?

10. *Counting on Children: Looking Forward* continued

5. (a) Would you rather be a Javanese or European woman bearing a child? Why?
   (b) What evidence is provided in these materials to encourage you to agree with Anawara that she may not be still alive in the year 2000?
   (c) Anawara longs to be an architect. What is the role of an architect in Australia? Is this role similar to, or different from, that envisaged by Anawara?

6. (a) What does Anawara's total commitment to having her "old" parents stay with her suggest to you about her culture? Is this the same as your culture's view of how to treat old parents?
   (b) Make a list of words that would best describe Anawara's feelings and attitudes about other people and places.
   (c) Is it fair that we should accept that a Javanese child will have a 25 percent chance of suffering from malnutrition in its second year, or can something be done to improve this situation? If so, how and by whom?

7. Imagine you are to host Anawara for a twelve month's student exchange programme and she will live with your family. How will you explain the future that you see for yourself in the year 2000?

8. Suppose you are a fourteen year old girl in an African school and the teacher has just given you the two pages of information you have been studying. What questions would you want to ask about people outside of Africa?

9. In what ways is the future of the world "counting on children"? Is this the same for all countries?

10. Working in groups, create role plays involving the following situations:
    (a) A Javanese mother seeking advice at a health clinic;
    (b) An Argentinian father discussing the future family with his wife;
    (c) Mothers from Bangladesh, Java, USA and Sweden discussing their family planning for the year 2000

11. You are Australia's representative on a United Nation's Task Force to implement a policy of family planning in Bangladesh. The policy is a one-child programme. What are your own personal feelings as you do so?

12. Compare a day in your mother's life with that of the typical Javanese mother, especially if they were both 8 months pregnant.

13. Find a map of the world and identify those countries that you belive will be counting on their children more than others. Give reasons for your choice.

12. *Children at Work: Earning Their Keep* continued

7. Study the table "Children Around the World".
   (a) What percentage of the world's population is under 15 years?
   (b) List the major regions of the world (shown in capital letters) where the percentage of the population under 15 is greater than the world average.

8. (a) Draw a bar graph to show the total numbers of children in 1980 in each of the major regions of the world.
   (b) Draw a second bar graph (using the same scale) to show the number of children in the year 2000 in each of the major regions of the world.
   (c) Examine your two bar graphs. In which parts of the world will the increase in numbers of children be largest?
   (d) In which areas will the increase be negative or very small?
   (e) What similarities are there between this pattern and that shown in your answer to Question 7(b). Suggest why?

9. (a) Use the table, " Children Around the World", to draw a scatter graph to show the infant mortality rates and the total fertility rates for each of the sub-regions of the world (lower case letters) and North America, USSR and Oceania (upper case letters). Draw in a line of "best fit" to show the trend of the data.
   (b) What conclusions can you make from this graph?
   (c) Can you think of a reason for this relationship?

10. Use the table, "Children Around the World".
   (a) List those regions of the world where the percentage of children (10-14 years) in the work force is less than 10 percent.
   (b) List those regions where the percentage is greater than 10 percent.
   (c) Compare these two lists with your answers for Questions 7, 8 and 9. What is the general pattern?
   (d) Latin America scores fairly highly on the infant mortality and life expectancy measures yet quite low on the percent of children in the work force. Suggest possible reasons why Latin America is low on the percentage of children in the work force.

11. Read Indira's comments, "On the Land". Is school useful for poor people in poor countries? Why/ why not? How could schooling help these people? What type of schooling would be necessary?

12. Read Luis' comments, "On the Streets". If he had stayed at school is it likely that he could have become a lawyer? Why or why not?

13. *Old People: The Greying of Nations* continued

5. Examine the panel called "The Population Pyramid".
   (a) What is a population pyramid? Why is it so called? Why might a population pyramid be an inappropriate term for the future?
   (b) For 1950 and 2025 draw two bar charts which compare:
      (i) the size of the 'over 60' population with the size of the 15-59 population, and,
      (ii) the size of the 'under 15' population with the size of the 15-59 population.
   (c) Study the data for the eight major regions of the world listed in the table. Use a calculator to work out how much the percentage of 'over 60s' is likely to change over the period 1950 to 2025. This can be found by using the following formula: $\frac{\text{Percentage aged over 60 in 2025}}{\text{Percentage aged over 60 in 1950}}$

      For example, Oceania: $\frac{17.8}{11.3} = 1.58$

      The result is the factor by which a country's 'over 60' population will increase. Therefore, Oceania's proportion of 'over 60s' will increase 1.58 times between 1950 and 2025.
   (d) Rank the eight major world regions in order of the change in the percentage of their 'over 60's' population. Show your results in a chart or table.
   (e) Why do you think some parts of the world are likely to experience a greater increase in their 'over 60' population than others?

6. (a) In the article, what do you think the United Nations meant when it referred to "the problems of ageing"?
   (b) How would you like to spend your time in old age?
   (c) What rights would you like to have when you get old?
   (d) Should old people today have the same rights? Do they? Why?

7. Form into a group of three or four and look at the panel which has the caption 'Life after 60'.
   (a) Imagine you are a team of political advisers in the year 2025. You have been hired by the main opposition party who is hoping to win the next general election. Use the information in this panel, and other information, to formulate some key policies which the party can offer to elderly members of the community.
   (b) Should government policy regarding the aged be determined by their voting power at elections? Prepare a brief address, to be presented to the class, which challenges this approach.
   (c) It has been said that "there is nothing more demeaning for a person of any age than to be told they were too old to work". The United States and Canada have both scrapped the compulsory retirement age. Should people be forced to retire even when they are perfectly capable of continuing to work? Should youth unemployment be taken into consideration in a community's decision about compulsory retirement?
   (d) Imagine you are approaching the age of 60 and that you are in good health. You are faced with the choice of continued employment or retirement. Which would you choose and what sort of things might influence your decision?

14. *Female Labour: Women Hold Up Half the Sky* continued

7. (a) Compare the amount of agricultural work completed by women in Algeria, Venezuela and Bangladesh with the amount of agricultural labour generally completed by women in developing countries.
   (b) Suggest reasons to account for these variations.

8. (a) How many hours per year does the average Western housewife spend on housework?
   (b) How does this compare with the hours per year which the average paid employee working 35 hours/week.
   (c) Estimate an average wage for a person working a 35 hour week and use this to determine how much money the Western housewife should be paid for her housework.
   (d) List all of the work which your mother completes during one day (you may need to ask her about this) and estimate how much time it takes her to complete each task.

9. Study the diagram "A Woman's Work is Never Done". Redraw the 24 hour clock at a larger size in your notebook. Now present the information in the diagram in the form of a shaded pie chart conventions.

10. (a) When might a rural African woman have time to pursue some sort of recreational activity?
    (b) Suggest some activities which they may participate in during their "leisure" time?

11. Using the list from Question 8 (d) of the work which your mother completes during one day, - present the information in the format of a 24-hour time clock similar to the one in the diagram.

12. Compare your mother's day with that of the typical rural African woman.

13. List the work which your father does during the day and the hours spent completing this. Compare this with your mother's working hours.

14. How do you feel about looking at your mother's and father's work in this way? Why?

15. *Working Mothers: Mrs Jana's Day* continued

9. Study the box called "The Housewife".
   (a) Which one of the three types of people depicted would you prefer to be? Why?
   (b) Who would you least like to be? Why?
   (c) Do you think it is fair that the men have so much more free time and do less unpaid work than the women? Why or why not?

10. (a) Construct two pie graphs which illustrate, on average, the amount of time that you estimate men and women in your society spend in paid work, unpaid work and free time each day.
    (b) Do likewise for a day in Mrs Jana's life.
    (c) Compare this with the pie graph of your mother's day. What differences do you notice? What could account for these differences?

11. Draw two bar graphs to illustrate the data for each country in the table called "Bringing back the bacon". Give your graphs a title which summarizes the major trend in the graphs.

12. Domestic work is "woman's work" whether she is in paid employment of not. Do you agree with this statement? Why or why not?

13. The statement "sisterhood is global" is used a couple of times on the page titled "Working Mothers". Drawing from the passage "Mrs Jana's Day" and the information presented on the page "Working Mothers" express what you understand by this statement.

14. In today's society, many women are pursuing higher paid professions in the workforce and, in some cases, husbands are choosing to stay at home and become "house husbands" while the wife goes out to work. Taking this into account do you think that the author of this article has exaggerated in stating that "women traditionally take lower paid occupations" and "domestic work is women's work"? Why?

16. *Women Farmers: Africa, My Africa* continued

4. Examine the box, "Division of Labour", and the background photograph:
   (a) Select some sentences in the passage which agree with the message written under the heading, "Division of Labour".
   (b) Select some sentences in the passage related to the two drawings (man on tractor and women doing non-mechanical task)
   (c) What is "threshing" and "winnowing"? Under which category in the box would these processes come? What process is depicted in the photo?
   (d) What crop is seen in the large photo? Where is it grown in Australia? What is its use in Africa? Why do we grow it in Australia?

5. Examine the box, "Female Farmers" in the right hand corner:
   (a) Which adjective applied to "women" in the passage sums up the statistical data under the heading "A Closer Look"?
   (b) Explain the role of "agricultural advisers", sometimes known as "extension officers". (Perhaps you could give examples of the work done in Australia by officers from our Departments of Agriculture.)
   (c) Of the country groupings in the bar graph which has the highest proportion of women agricultural advisors in relation to women agricultural workers?
   (d) What barriers would prevent African women from attaining formal qualifications to become agricultural advisors?

6. Consider this idea: In an area where most farming is done by women would it be sensible in the short term to appoint some women advisors who may lack formal qualifications. This activity may help you to think through the proposition: An African country has a national programme to improve good output and nutrition. In groups, present short dramatic presentations to illustrate situations which may arise:
   (a) When a highly qualified (on paper) male adviser from a large city comes to a rural area to work with the farmers who are mainly women.
   (b) Illiterate women from local communities are given short courses in improved farm methods and a nutrition plan. There task is to educate the local farmers.
   (c) After the plays assess which persons have the greater chance of getting the programme adopted (?: Think out good questions for use in the dramatisation)

7. Consider the box, "Loss of land". (First, some background explanation: In some parts of Africa land has traditionally been farmed by extended family groups. As the value of land has increased, due to population growth and development, there is pressure to record *land tenure* on maps as official legal documents).
   (a) Where the documents are recorded in male names only, what injustices could occur with regard to the traditional inheritance customs, especially the rights of women?
   (b) Enquire into the land tenure situation of your own family. If there is any land or property what is the legal status of the men and women? Does this differ from the situation one or two generations ago? Do you know of any instances in your family history where women were unjustly treated with regard to land and property inheritance?
   (c) In what parts of Australia is the value of land increasing rapidly? What are some of the reasons for this? Is there increasing pressure to change the land tenure system?

8. Here are some more ideas for short dramatic presentations:
   (a) In an African country the man has gone away to the city or another country to work (e.g. from Mozambique to the mines in South Africa). The woman, who has a large family, invites another man to live with her. What arguments may arise re land tenure?
   (b) In Australia (circa 1910) a first generation Australian woman aged 60 years and who has borne 12 children and done the bulk of the farm management discovers that the property will not be inherited by her. Instead, male trustees will administer it on her husband's death.

9. Participation of women in government: In the last paragraph of the passage the symbolic African woman says: "Oh, if I had my way I'd rule over this continent".
   (a) Firstly, what duties does she say are inculcated in African women during childhood?
   (b) Many people believe that women are the key to real economic development in Africa, especially when they attain real earning power (wages).
      (i) According to the traditional values above, what would be women's priorities in spending?
      (ii) According to these same traditional values, what development issues would one expect African women in government to pursue?

10. "Vivarda" is a landlocked African country with a population of 5.5 million people living in an area of 116 thousand square kilometres. The population growth is 3.1% per year. Life expectancy at birth is 44 years. The main agricultural products are maize, tobacco and tea. There are many small farms with a low productivity; population growth is outstripping food production; work output is low because people are malnourished. Infant mortality is high and three quarters of the people do not have safe water. Most people are far away from health clinics. Women do the heavy work, have too many pregnancies and poor nutrition during these pregnancies. There is high unemployment and no social services for aged people. In the biggest settlement there is some industrial development but shanty town housing is out of control. Illiteracy rates are high and the country is short of expertise for teaching, tax collection, administration of the law, water systems, transport etc. Exports are dependent on two or three items, the prices of which are falling. These and mining are controlled by foreigners. There are continual border military "events" with neighbouring countries.

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16. *Women Farmers: Africa, My Africa* continued

As a class you are the politicians in Vivarda:

(a) Divide into groups, some of men and some of women.
(b) Select the main problems you need to solve.
(c) Rank the problems in order of importance.
(d) Select three problems where the government can initiate practical work immediately
(e) Plan out the steps which can be taken to help solve each of these problems you have selected.
(f) At a "parliamentary" session present a summary of the group's work
    (i) Has any distinct gender difference emerge with regard to the priorities allotted to problems or in the approach to solving these problems?
    (ii) If not, can we say that it merely reflects that Australian males have developed different attitudes from African males? (Note a more realistic and difficult approach would be to advise the participants to try thinking themselves into the attitudes and values of African people while undertaking the simulation.)

11. Debate or write a paragraph on the statement in the passage, "Africa is dying because of me".

17. *Women in Africa: Caring for a Continent* continued

8. Study the table "In the Fields":
    (a) How closely do the apparent differences between Fafia's work and her husband's work (as described in the text) match the figures comparing men and women in the first four tasks listed in the table? (i.e. How "typical" is Fafia when compared with these averages for women in Africa?)
    (b) The information in the table could be easier to read if it were presented as a bar graph. Make such a graph, re-ordering the chores so that those done completely by women appear first and those done mostly by men appear last.
    (c) The figures in the table do not indicate the time or effort required to do each kind of chore. Some chores done mainly by men may have been left out to give an impression that women do much more than men. Do you think that the list of chores is a fair break-down of the total work done? Explain.

9. Look at the graphic and caption "More Work":
    (a) How could fertilizer mean more weeding and hoeing for women?
    (b) What constant chore makes agricultural work done by many women take longer than it should?

10. Study the graphic "At school". Compare the amount of education provided for women with the amount of work they do (as shown in the table "in the fields"). Where does this education (a) most closely and (b) least closely, match the relative importance of women in that type of work?

11. Fafia's daughter is learning to read and write. Select three chores done mainly by women and describe how Fafia may one day do them better as a result of her education.

12. Imagine you are a United Nations official planning an education program aimed at introducing a new agricultural technique in an African country as part of the Decade of Women. You must consider the attitude of the government concerned.
    (a) Write a brief policy statement justifying why you want to aim it mainly at women.
    (b) Next, write two brief policy statements that the government might adopt in response: one conservative and the other progressive.

18. *How to Feed the World: A Quiet Hunger* continued

7. (a) Examine the five strategies suggested. Arrange them in order of importance, in a diamond pattern with the one you consider important at the top, least important at the bottom and the other three in a middle row.
   (b) Compare your arrangement with a partner. What are the differences?
   (c) Write up your own list with reasons why, and the differences from your partner's point of view.

8. Divide your class into five groups, with each group working on one of the five strategies. Your task is to work out the obstacles or reasons why each of these five solutions are not being practised. Present your findings to the class.

9. In a group of six, role play the following scenes. Two of you are the Prime Minister and Deputy Prime Minister of a Latin American country with high debt repayments. Two of you are the President and Assistant President of a multinational bank which has loaned the country money, a large amount of money (say $50 billion). Two of you are experts on development with the International Monetary Fund. The first scene involves the debtors talking to the bankers asking for relief, and eventually (second scene) they are then sent to the I.M.F. Research your roles and then act them out.

10. Draw a map of sub-Saharan Africa showing Burkina Faso, the Sahel, Sudan, Tigray and Ethiopia. What other countries fall into this ecologically fragile zone?

11. Imagine you are a journalist working for a teenage magazine. Your editor has sent you to report on conditions in the maps in Sudan for refugees from Tigray. Your editor wants a story strong on human interest, along with illustrations. Write an article for publication addressing questions like, who are the refugees (i.e. men? women? kids?) Where are they from? Where are they there? What sicknesses are there in the camp? What about hygiene (like latrines)? What food supply is there? Where is it from? How is it distributed?

12. Why is food aid not a long-term solution? If food aid is necessary in a crisis, what happens if the crisis persists a long time? Should food aid, like wheat from Australia, continue? Why or why not?

13. Imagine Bob Geldof is visiting your town or area and your class has the chance to interview him about Live Aid. What three questions would you personally ask? Make use of what you have learned so far. Write them down and then compare with a partner and decide on the three best. Now join into a group of four and select the best three. Finally decide on the best from all the groups in the class. How do you think Bob Geldof might answer these three questions?

19. *Green Revolution: An Empty Revolution* continued

8. If you were able to suggest policies to help peasant farmers gain access to the benefits of the green revolution, what would be four of five key points you would make?

9. Western nations provide aid to countries like those described in the passage to help improve the plight of the people. These same Western nations import the types of products mentioned for our consumption. How do you feel about this apparent contradiction?

10 Imagine you had the task of presenting a report to highlight the key issues related to food supply problems facing countries like Mexico. Your task is to present this report as a slide-tape commentary.
   (a) List 10 or so slides you would want to include. Draw a space for each slide and give it a title.
   (b) Describe what each slide would show and what key point it would highlight.

20. *Terraces of Diversity: The Dwindling Seedbank* continued

10. (a) Using the graph called "Loss of diversity", construct two columns, headed "Year" and "Wheat Varieties".
    (b) Fill in the appropriate figures for each year.
    (c) With the rapid decline in wheat varieties over 40 years in Greece (95% decrease), how do you think food production would have been affected?
    (d) Prepare a list of Greek foods and tick off those which would be unavailable without wheat.

11. In your opinion, what will be the effect on food supplies in 50 years time if the present trends in seed use continue?

12. Write a letter to the Managing Director of one of the major companies listed in the main passage, outlining a plan of action for the replenishment of the genetic seed banks.

21. *Pesticides - Their Use and Abuse: Harvesting Poison* continued

4. Six ways of "attacking the superpests" are illustrated.
    (a) Explain briefly how each of the six outlined options could be used to attack the superpests.
    (b) Which of the options mentioned would be best adopted by Anisar Aguilar in the situation he is facing?
    (c) Which of the options would cause him more problems and would be outside his ability to implement?

5. Look at the cartoon drawing of the globe:
    (a) What emotions are represented on the face and hands depicted on the globe?
    (b) What message does this convey to you?
    (c) Which areas of the world are depicted as being most affected?
    (d) What groups, organisations, nations, does the plane symbolise?
    (e) The swirling lines of pesticide describe the extent of the problem. What natural aspects of the earth's environment cause the problem to spread?
    (f) Which country is the source of much of these pesticides?

6. A newspaper story has just been published that says: "More than 30% of all pesticides exported from the United States are regarded as too dangerous to be approved for use within the Country". Imagine you are the Chairman of a large U.S. Company which exports large amounts of pesticides to Third World countries. Prepare a report to your shareholders justifying your company's continuing involvement in this practice.

7. Imagine you are a representative of one of the six options to attack superpests. Faced with the problem of Aguilar, write a report to the UN on the viability of your option to solve the problem. You should be prepared to explain the advantages of your option and also prepared to counteract the questions which try to highlight its disadvantages.

- Leave space for a title and use half your page width for the first five columns and the other half of the page for the last column.
- Transfer the information from the box to your columnar table by listing the nations in descending order of reliance on wood as a source of energy.
- Now complete the ranking column working from "1" through to "27", using tied ranks wherever appropriate.
- Complete the continent column using "**AF**" for Africa, "**AM**" for the Americas and "**AS**" for Asia. Work through the table completing the locations for those nations you recognize as you may be unsure about the location of some countries. Check your responses with a recently published atlas to locate these "lesser-known" nations!
- Now, making reference to an atlas map of the world that shows political boundaries, jot down in the final column any correspondences you note between dependence on wood as a source of fuel energy and the availability of fuelwood as shown in graphic studies for Activity 3 (above).
- Use the statement from 4(a) as a title for your completed table.

(c) Based on your work in 4(b), discuss your findings with the class in terms of:
  (i) Which countries could the class "place" immediately? Why might this be the case?
  (ii) Which nations were less easily placed or located without altas assistance? Why? (Go and find out something about these nations to make you a more informed global citizen!)
  (iii) Do you note any general trend in the continent column? Is this expected/surprising? Why?

(d) From your work in 4 (b), respond to each of these questions about your study thus far:
  (i) Where are there correspondences or correlations between the mapped data and your table?
  (ii) To what extent are there general trends and patterns or are there only isolated instances?
  (iii) From your general experience, media reports and class study, are there any specific topics that link the issues of wood's availability and its use for fuel? (Here are some "starters": Amazonian "development"; Sahelian land degradation and desertification; Himalayan topsoil losses.) This could be a starting point for further inquiry in a case study format.

5. Examine the illustration by Barky Tag al Din.

(a) Through a drawing or representation, an artist hopes to communicate! At one level, you may see this illustration as being nothing else but a person carrying a bundle of fuel sticks. At another level, it might convey something more complex or symbolic. So: Look! Think!! Reflect!!! Stand well back from the artwork and observe it. Turn it around - even upside down! What do you see? Look at it from all possible angles!

(b) Express your experience of this artwork in a substantial paragraph in which you aim to:
  (i) Describe the things you can see and sense,
  (ii) Nominate the "clues" in the drawing that led to these conclusions, and
  (iii) Give a title to the piece that you feel compliments the artist's work .
  Feel free to examine the illustration on a variety of levels. Don't ignore the obvious in a bid to be creative but be able and ready to share your ideas and argue for their validity with your teacher and peers. Remember: there is no one "correct" answer but rather the potential for many good arguments and interpretations when people are willing to respect others' opinions.

(c) As an extension, write about your feelings on the fuelwood crisis/issue by using the haiku poetic form. (Consult a standard verse text for details of this simple but powerful medium.) When you are finished, read the haikus and compare the different impressions that the class members have developed so far about this topic. (Display the poems for easy reference.)

6. Examine the two blocks: "Deforestation Problems" and "Possible Solutions":

(a) Study each set ensuring that you can comprehend the explanation offered for each heading. Be able to extend each explanation on the basis of your studies thus far.

(b) Compile a glossary of terms that come to mind from these graphics: "appropriate technology"; "(land) denudation"; "desertification"; "resource degradation", etc. Add to the list!

(c) Often the problems are obvious and sometimes well documented, yet there are impediments to the implementation of "solutions". What obstacles or hurdles can you envisage with the introduction of each of the four "Possible Solutions" as given? List general as well as specific impediments.

7. Let's see what you've mastered from your study of this very important issue so far! Your teacher (in conference with you) will structure this activity in terms of time, resources and the more specific constraints of place and culture. The aim is to provide an overall awareness of the issue of fuelwood use and abuse and the consequences for communities at the micro and macro scales through role-play, drama and a debriefing or discussion phase. Remember where we started? With Nila's daily trek for firewood across that desolate landscape.

Situation: A group of community forest workers have been sent to Nila's village (the one in the opening passage) to suggest some solutions to that area's fuelwood crisis. The group consists of representatives of district and local governments, the United Nations Environment Programme (UNEP), interpreters, etc. Their brief is to develop an "Action Plan" for the village community to meet its fuelwood needs and listen to village reaction and opinion.

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22. *Fuelwood Cricis: Fire On Their Backs* continued

(a) Take roles as devised by the class: forestry advisers; government officials; bureaucrats; the village men, women and children; possibly others such as "environmental refugees", the head of the village council, a trader or herder. YOU determine the roles in a class planning lesson as YOU are most aware of the how YOUR class sees this issue and YOU also have to select a place in Africa, in which to "set" YOUR role-play - for example, the West African Sahel.

(b) The role play - and you should take this as far as you feel comfortable, e.g. by special costumes, if feasible.

(c) The role play will take the form of a village meeting where at the officials will try to convince the community to undertake whatever projects have been devised.

(d) Consider how you will "act" in such a situation and although reality will have to be transcended to achieve an ideal interaction, think about how you can use your experiences to date! Don't just decide what you'll say but how will you say it, where will you be and how you will get your point of view across, keeping in mind that there may be many ways of trying to attain a goal such as an easing of the fuelwood crisis? For example, how are the officials going to "sell" their plan? (You can glean ideas from all sorts of places. One BBC video shot in Burkina Faso in 1983 showed a planner convincing Mosse villagers to rekindle the traditional concept of "naam" (cooperative labour) and he did so by using an old Mosse folktale or parable about a cat stalking a mouse!)

(e) *Debrieling*: Your teacher (who may or may not have been directly involved in the role-play) will give the class some feedback and evaluate your work after hearing from you about:

8. To sum-up: What have you "learnt" from these exercises dealing with the fuelwood issue? What is the most important thing that you have gained or given through these activities?

9. How does the fuelwood crisis in the South affect you, a "westerner"? Can you see links with our nation apart from our role with Nila and her village community as the joint stewards of this planet? What can we do to help solve the crisis? Perhaps, like the writer of the opening passage, it pays immediate dividends just to be aware every time we think about using energy!

23. *Water: A Precious Burden* continued

10. Because we live in a society in which water is on tap and taken for granted, we often tend to waste it. Devise an advertisement, with an illustration, urging people not to waste water. You may like to suggest ways people can cut down on the amount of water they use.

11. Compare the amount of water used in the rich world with the amount used in the poor world.
    (a) Do you think that people in the rich world uses more water than they need? What evidence can you find in the data to support your answer?
    (b) What does the large picture of the child near the fire hydrant say about the rich world's attitude towards water?
    (c) How do you think a person from the poor world might react if he/she saw this scene?

12. Imagine you are one of Nyeri's children, you have come to Australia for a week. Write a letter home to your mother and family describing the way Australians use water.

13. Examine the four pictures of the way people in the poor world use water. What do they suggest about the value these people place on water? Comment on each picture.

14. In rural areas of the Poor World, what is the major determinant of the amount of water a family can afford to use.

15. The United Nations declared the 1980s to be the International Drinking Water Supply and Sanitation Decade.
    (a) Do you think their goals (to provide clean water and sanitation to all people) are justifiable? Why or why not?
    (b) Were these goals met? Why or why not?

24. *Water: Drawers of Water* continued

5. (a) Suggest a title for each of the photographs included in the resource sheets.
   (b) Which photograph do you feel best sums up the intention of the article? Why?

6. In addition to the water needed each day for cooking and drinking, how much extra does the World Bank estimate that a person needs to stay clean and healthy? Do you consider the World Bank to be an appropriate organisation to make such an estimation? Why?

7. How do you know that water is more important for survival than food?

8. Use the following technique to allow as many people as possible in your group to participate in the process of decision making:
   (a) Decide on a question related to the article which needs an answer. One suitable one would be, "What can be done to improve the water supply of rural dwellers in the Third World?"
   (b) Your group selects six or seven members to represent it and one to act as recorder.
   (c) Those selected sit in a circle with one empty chair.
   (d) The seated group discusses the question and as solutions are suggested they are written down by the recorder.
   (e) As the discussion progresses, other members from outside the circle may sit on the empty chair to join in the discussion.
   (f) When finished, these members leave the chair for someone else.
   (g) At the end of the discussion or at a previously arranged time, the class examines all the suggestions and arranges them in order of priority.
   (h) They are then prominently displayed.

9. The following strategy could be used as an alternative to the process used in Question 9 :
   (a) The whole group brainstorms all the community's assets in improving the water supply situation. These are listed where all can see them.
   (b) A similar brainstorming identifies all those characteristics which are holding the community back as far as its water supply is concerned.
   (c) Sub-groups could then be assigned specific tasks in making the positive forces even stronger and suggesting strategies which will diminish the strength of negative forces.
   (d) All strategies will then be displayed as an Action Plan.

10. (a) Find the meaning of the phrase "Division of Labour".
    (b) Give examples of how it operates in Third World rural communities. Duties concerned with obtaining a water supply should be examined first.
    (c) Do you think that it would be possible to alter this pattern of life? Give reasons for you answer.
    (d) Do you know of any examples of "Division of Labour" in your society. Do you think this is fair? Why?

11. Form into groups of three or four students. Imagine that each group has visited villages in rural areas of the Third World and each is preparing a report to present to an International Aid agency recommending measures which could be funded to alleviate water supply problems in the villages studied. Each group has been advised to consider the following in drawing its report:
    (a) Respect for the social traditions of the people
    (b) Funding is best spent on projects which the native people can manage without further cost by themselves
    (c) "Obvious" solutions such as utilizing rainwater in large containers, water farming, water harvesting etc.

    Each group will present its report to the rest of the class and answer questions. The whole class may use all the reports to prepare one class report which could be sent to an international aid agency.

25. *Irrigation: The Blue Revolution* continued

10. Imagine that you are an advisor to the authorities responsible for irrigating fields in Africa. What would you suggest that they do to successfully irrigate the land and grow crops? Why?

11. If you were a farmer in China or Java (see passage "The Blue Revolution"), what would you be doing to combat the side effects of irrigation schemes? Why?

12. Study the graph that you drew in Question 5(a). Make a list of four actions that could be taken to ensure that the food yield per person will not decline at such a high rate in the 21st century as it will between 1975 and 2000.

13. (a) Describe the irrigation processes that are used on Australian farms. You might like to research this in your library. Also, find out the amount of food that is produced per person in Australia.
    (b) Compare this with the information on your graph in Question 5(a).

14. The Greenhouse Effect is expected to cause a rise in the sea level, as well as increased rainfall in many areas of Australia. Explain how this might effect irrigation schemes and food production in Australia.

26. *Big Dams: Walls of Water* continued

(c) Find out some of the geological restrictions on large dam schemes (bedrock, porosity, earthquakes).
(d) Comment on the disastrous impacts of the "Glen Canyon" dam build on the Colorado.
(e) Find out about the role of the World Bank in large dam projects throughout the world.
(f) Prepare a protest poster against the building of Dams in the Amazon of Brazil.

27. *Schistosomiasis: Mustafa and his Donkey* continued

(b) Now write a brief paragraph to explain what seems to be important to the doctor and how this causes problems in providing medical services for people in the village.

8. (a) Look at "The Deadly Cycle" diagram. For each stage in the cycle, list the things which people have done with the environment, the way in which they live, dress and work and what they know or don't know which enables the cycle to continue.
   (b) Write one or two sentences to explain how people have helped the cycle to continue.

9. (a) Look at the maps which show where the Schistosomiasis parasite occurs in the world. Find out from atlases and other books what the population density is like in these countries and whether the people are generally wealthy or poor.
   (b) Write a paragraph on how you think these things might affect the people's living conditions, technology and knowledge, and how this in turn might affect the continuation of bilharzia and other diseases.

10. (a) From the diagram, "Breaking the Cycle", build up a table with four columns:
   - In the first list all the separate things which could be done to break the cycle.
   - In the second column list how each of these things could be put into operation (e.g. drugs - medical clinics).
   - In the third column list who might be responsible for each action.
   - In the fourth column list those things which would be needed to make each action successful.

   (b) Write a paragraph to explain what the most important needs are in trying to break the bilharzia cycle and make an assessment of the advantages and disadvantages of using the measures you have listed in your table in trying to meet these needs.

11. Is there any evidence in the story that measures to stop the spread of bilharzia were considered or taken when the Aswan High Dam was being planned or built?

12. Hold small group discussions on the kinds of measures which might have been taken, who could have taken them and why such things may have been or not have been done. Share your group's ideas with other groups and discuss them with your teacher.

13. Can you find any other examples in this book of how attempts by foreign countries to bring about improvements for people have also led to worsening of problems? For each of these examples, list the nature of the improvements intended, the nature of the problems which were caused or worsened; then list the ways in which these situations are similar or different and try to explain whether the reasons for these situations developing in the way they did are similar or different.

28. *The Fragile Earth: Life on the Brink* continued

11. Imagine you are faced with all of these potential hazards.
   (a) What precautions could you take against each one?
   (b) What damage and impact would each have on your community?
   (c) How would the relief organisations cope with the disasters?
   (d) Which groups or areas might be affected? Explain your answer.
   (e) How might the response of relief organisations be different in poorer countries of the world?
   (f) How might you as an individual assist when disasters occur in parts of the world?

12. Which major hazards do we have in Australia?
   (a) How are they intensified by people?
   (b) Which areas of Australia are affected by all or some of these hazards?
   (c) Are these areas at risk all of the year? Explain your answer.

13. What do you understand by the statement: "The hazards may be natural - but humans decide who will suffer from them."

29. *Shifting Sands: Fragile Environment* continued

9. Research the topic of desertification in your library to complete the following table:

Misues	Causes	Effect on Environment	Effect on People
Overcultivation Deforestation Unskilled Irrigation Overgrazing			

10. Research what is being done in Australia to reduce desertification by:
    (a) planting treees
    (b) controlling grazing
    (c) improving agricultural methods.

30. *Poisoned Air: The Land is Sacred* continued

    (d) Explain your answer in a short paragraph.
    (e) Do you know of any damaging air pollution in your community at present? Explain.
    (f) How can you, as a concerned citizen, prevent further degradation of our environment through air pollution?

10. Cubatao in Brazil, Sudbury in Canada and British power stations are listed as three major world examples of air pollution.
    (a) Conduct library research to find three major world examples of :
        (i) water pollution, or
        (ii) wilderness destruction.
    (b) Write a fifty word summary of the effects of each of your three examples.
    (c) Continue your research on the environmental problem you are studying (water pollution or wilderness destruction) to identify five possible effects. Write fifty word summaries of each effect (as the resource page does for air pollution).
    (d) Draw up a table of statistics or draw a graph to highligt how bad your environmental problem is.
    (e) Draw or collect a picture (like the man with a gas mask on a bicycle) to show how human life might be affected by your problem.
    (f) Now assemble all the material you have researched on your problem and design a resource page similar to the one on air pollution.

31. *Urban Drift: The Child of Old Delhi* continued

6. Look closely at Urmila's reasons for staying in Old Delhi and your table of push/pull factors. Why do you think she is unaware of the education advantages?

7. The case of Urmila's move to the city seems to support the trends observed in Questions 1-4. Yet, there is a wide gap between the vision of the future and the reality and consequent disappointment of the presnt.
   (a) In what ways can you detect similarities of attitude?
   (b) Why isn't Urmila disenchanted with the city?

8. To what extent do you agree with the view that "Shanty towns can be seen as both cancers and catalysts in terms of the economic growth of a developing nation." Why?

9. "Without a doubt, shanty towns provide a huge pool of unskilled labour." How can a developing country take advantage of this situation?

32. *Shelter: Living on Stilts* continued

5. Read the paragraph called "Who Benefits?". The shanty towns provide a much needed place for the poor to live. Therefore, why are they illegal in many Third World countries?

6. Look at the large photograph on the right hand side of the page.
   (a) Describe the expression on the faces of the people. Why might they feel like that?
   (b) How do you feel when you see people living like those in the photograph? What would it be like for you to walk along that laneway? How might the people in the photograph react to you if you were to go there?
   (c) Is the photograph a factual image or one designed to make you feel emotional? Explain your reasons fully.
   (d) The people in the photograph look as though they are sitting around doing nothing. Do you really think they would do that all day? Is the photograph showing these people fairly and accurately?
   (e) Do Australians have any responsibility towards people such as those shown in the photograph? Explain.
   (f) Look at the photograph near the passage, "Living on Stilts". It shows a person living in a shanty settlement. Are there any differences in the ways he is responding to his situation compared to the people in the large photograph?

7. Read the paragraph, "The Way Forward".
   (a) What policy does it suggest would ease the current situation?
   (b) Do you agree with the suggestions made? Explain why or why not?

8. Why do people in the Third World move from rural areas to the cities if they will meet such poverty when they arrive?

33. *Land: Justice by Night* continued

(b) Discuss and note down your response to the following statement: "A small number of individuals controlling the majority of land in developing countries will result in widespread land shortages for rural workers". Use the bar graph data to support your answer.

10. Refer to the article, " Need or Greed", and answer the following questions:
    (a) Three quarters of the world's available land is owned by what percentage of landowners?
    (b) Which company is the largest private landowner in the world?
    (c) What proportion of the people living in the Third World cities have no secure home?
    (d) Describe the types of land reforms successful in China and North Vietnam?
    (e) Why did land reform fail in Peru?

11. Discuss and note down your response to the statement "Multinationals such as Volkswagon, King Ranch and so on are only developing needed resources and helping develop much needed money to domestic and international markets".

12. In what ways are multinationals and foreign countries creating problems for Australians wanting to a acquire their own house/land?

13. Suggest some policies that could be instituted in all countries to bring about a more even distribution of land ownership?

14. Discuss the following statement: "Landowners have a right to do what they wish with their land, they have no obligation to share their land with anyone or any group without land".

34. *Tourism: The Camera's Special Effects* continued

4. Examine the diagrams showing the "Costs and Benefits of Tourism".
    (a) Choose one benefit and one cost, and explain why each has that positive or negative impact.
    (b) Categorize each cost and benefit as either an economic, a social, a cultural or an environmental impact.
    (c) Use the information in the passage to complete the following table:

Type of Impact	Benefits	Costs
Economic Social Cultural Environmental		

5. Examine the photograph in the top right hand corner and answer the following questions:
    (a) Imagine the setting and people are changed. It is set in your front yard. The person on the ground is your mother sitting on the verandah. You have arrived to find an overseas tourist taking a photograph. How would you feel? Why?
    (b) Change the setting again. You are an aborigine. Your mother is weaving a basket to carry leaves for a special ceremony. Would your reaction be any different to your one in Question 5(a)? Why?
    (c) In terms of traditions, what is so ironic about the woman taking the photograph? (Use a dictionary to find out what "ironic" means.)
    (d) How could we consider this photograph to be a warning?

6. This activity is a role play about the effect of tourism in a Third World area. Your teacher will divide your class into groups of four people with each person representing one of the following roles.

    - Members of the Tourism Development Association who are assessing the potential of a new airport in this local area to promote tourism.
    - An older village chief who is a respected community leader.
    - The son of that chief who is popular amongst his peers and is intrigued by western machines, equipment etc.
    - Farmers who are disturbed by the fact that a new airport is being proposed for an area which could be used for an irrigation system.

    (a) Individually prepare your ideas on the future development of tourism in your village area.
    (b) Conduct a group forum to present all your ideas.
    (c) Using the ideas presented in the forum write a group report in which you propose some guidelines for the development and control of a tourist industry in your area. Your guidelines should aim at maximising the positive impacts/benefits of a tourist industry whilst minimising the negative impacts/costs.

35. *Appropriate Technology: The Right Machine for the Job* continued

4. Here is a list of possible research projects on appropriate technology. Select one and present the results of your research to your class as a lecturette illustrated by an attractive and informative chart or poster.
   (a) The Chimpana system of agriculture in Mexico. How appropriate is this form of technology for traditional farmers elsewhere in the world?
   (b) Simple charcoal stoves developed in East Africa. To what extent are they successful in conserving energy resources?
   (c) Alternative energy sources, e.g. use of geothermal or solar power, on outback Australian stations.
   (d) Agro-forestry in India and Burkino Faso. How successful has it been?

36. *Tools for Change: The Disappearing Middle* continued

6. Study the illustration and passage, "The Village Smith".
   (a) What is the vital role that smiths still play in the Third World?
   (b) Why is the work of a village smith undervalued?
   (c) Why should the skills of the smith be encouraged and developed?
   (d) After looking at the photograph make a list of the advantages and disadvantages of using a manual saw instead of a chain saw.

7. Imagine you are a farmer in a Third World country, describe the impact new tools would have on your lifestyle.

8. What is the drawing of the person with a hammer instead of a head trying to tell us?

9. Imagine that you are a journalist. Write an article for the local newspaper which will encourage people to donate their old, unused tools to Third World countries. It must be convincing enough for people to make an effort to donate some tools.

10. Is intermediate technology appropriate for Third World countries? In small groups discuss your reasons for and against intermediate technology.

37. *Overseas Aid: Aid - Brick by Brick* continued

6. The aim of the British aid project is equality and justice to the poor. From the point of view of the villager in this article, is this a fair assumption?

7. Here are 5 criteria for a successful development project:
   - It originates with the people involved at a village level.
   - It generates real social change.
   - It does not take away local initiative through the use of outside experts.
   - It does not reinforce the dependence on materials and skills from rich nations.
   - Its success is measured by the local people as the project progresses.

   (a) Based on the above criteria, how does the writer portray the British aid to India?
   (b) How reliable would you consider this information to be? Why?

8. Do you think the writer could be biased against some forms of government overseas aid? Why?

9. What further information could be obtained to make a more valid judgement on the usefulness of British aid to India?

10. Using the "Overseas Aid" diagram, list the 6 ways in which overseas aid benefits the donor nation.

11. "Overseas aid is like an artichoke". Using the data on this page, explain what the writer means by this.

12. Which examples of "artichoke leaves", i.e. types of overseas aid, do you think are referred to in the passage, "Aid - brick by brick"?

13. In total aid given, which nation is the biggest donor?

14. Why is the USA considered the least generous of the OECD nations?

15. According to the diagram, how much and what percentage of over seas aid is effectively given? What do you think is meant by "effectively given"?

16. *Role Play*: The newly elected government of a Third World country wants to achieve genuine development for its people. It has undertaken a grass roots survey of the needs of its nomadic villagers. It is a semi-arid nation in which about 60% of the population are nomadic herders. They raise goats, sheep and camels for subsistence and sale to the neighbouring oil richcountry of Marjul. Roads are few and vehicles, mechanics and parts are in short supply. The following sorts of things are needed in your country:
   - Basic health care
   - Permanent, non-polluted water supplies
   - Communications i.e. all weather roads
   - Transport vehicles

   Total estimated cost: $20 million.

   The following aid packages have been offered by the United Kingdom, USA and Australia:
   - **United Kingdom:** Will lend up to $20 million with 5% p.a. repayment over 20 years.
   - **USA:** Offers highly paid technical experts in the fields of health, engineering as well as the following technical equipment: road making equipment, 4WD vehicles, farming equipment. All projects to be staffed by US experts paid for with aid money and all equipment purchased from the USA. Value: $20 million
   - **Australia:** Offers the help of a non-government overseas aid organisation, which will provide vehicles and equipment for drilling wells to provide clean water, training of mechanics by Australian volunteers. Value: $8 million

   Work in groups of four students and discuss the pros and cons of each aid package. Only one can be accepted. Appoint a leader to report on which package your group would accept, and why.

38. *Land marks for Change: Going with an Empty Hand* continued

Groups:
- The Nepalese Government
- Western aid organisations
- villagers in Palpa
- Independent observers
- Health workers engaged in the new scheme?

6. If representatives from a large transnational medical supplies company were asked to comment about this new-style health programme, what do you think their reaction would be? Explain your answer.

7. Refer to the village scene on the diagram titled, "Landmarks for Change".
   (a) To what extent does the evidence in the diagram suggest that this village is being influenced by Western or outside help/aid. Explain your answer.
   (b) Does this picture represent the old or the new system of small-scale aid? Justify your answer.

8. If a large-scale aid project was set up in the Palpa community by an Australian aid organisation spending millions of dollars in equipment and supplies, it would be reasonable to assume that the village that we see on the resource page would be substantially different to the village that received so much outside help. Using the picture on the resource page as a base, add the type of changes the village would undergo if it received large-scale help as described in the passage, "Going with an Empty Hand". The following steps will help you:
   (a) Copy the "Landmarks for Change" diagram onto an A3 sheet (Master Sheet).
   (b) On this master, use "white-out" to erase the five guidelines for small-scale aid projects. This will leave you with five blank spaces on the drawing of the village.
   (c) Copy this master sheet so that you have one copy per two students. You now have in front of you a drawing of the Palpa community village with five blank areas.
   (d) Complete the task by drawing in the spaces (blanks) the type of development that would occur in the village if an "Old Style" aid programme was set up. (Suggestions include paved roads, hospitals, tractors/farm machinery, Coca-Cola signs, more cars, small factory/bank, etc. etc.
   (e) Compare your finished diagram with those developed by other students in your class. Make a list of as many changes to the village as possible.

9. Study the original "Landmarks for Change" diagram agai, and, working with a marker pen and one sheet of butcher's paper (or equivalent) for your pair of students:
   (a) Assume the role of a group of aid-workers who are planning a small-scale aid project in the Palpa community. Decide in which order these guidelines would be best applied.
   (b) Using the marker pen and butcher's paper, draw "a stairway to development" by writing down the order/priority of the guidelines you have just discussed.
   (c) Present your "stairway to development" to the class, giving the reasons behind the order of priority that you have assigned to each guideline for development.

10. Explain how the policy of "going with an empty hand" might apply to Australia and the Aborigines given the following Australian statistics.
   - Aboriginal unemployment is 24.6% while white unemployment is only 7.6%.
   - Average annual family income is $12,060 while Aboriginal family income is only $6,260.
   - The proportion of Aborigines living in improvised shelter is 9.0%, while the national average is only 0.2%.
   - The proportion of Aborigines receiving no schooling is 11.7%, while for non-Aborigines it is only 0.08%.

39. *Alternative Trading: Partners* continued

(f) Some people argue that individuals are powerless to challenge the economic and political systems and institutions of the world which support the present trading system. Do you agree? How would you challenge this argument?

(g) One of the white boxes recommends buying from small businesses and local cooperatives. From your own experience, are the small businesses selling different products from those in large stores or supermarkets? Are there products and services in your neighbourhood grocery store which would not be consistent with the ideas and principles recommended by "alternative trading"?

7. In the 1970s, an international campaign was launched to protest against the marketing by large transnational corporations (e.g. Nestle) of baby foods in poor countries. Such marketing had persuaded poor mothers to put their babies on costly baby foods, leading to malnutrition, illness and many unnecessary baby deaths. In a group, prepare roles for the following actors:

- Transnational corporation producing infant formulae and babyfood.
- Nurse hired by corporation to persuade poor mothers in Third World country to substitute breastfeeding with baby foods.
- Pregnant poor mother and mother with newly born baby.
- Community health worker concerned about the effects of baby foods upon poor families.
- An Australian citizen representing the international campaign to boycott corporations marketing the baby foods in the Third World.

Act out the roles in class to demonstrate the following:

(a) Values and motivation of each actor.
(b) Nature and effects of the use of infant powder.
(c) Nature of the international boycott campaign.

8. Compare the present nature of Australia's trade system with the alternative trading system suggested between rich and poor countries. What are the major differences? Would it be easy for Australia's trade with poor countries to change towards more alternative forms of trade? What changes in values and lifestyles of Australians would be needed? What political obstacles and forces would stand in the way? Why?

9. Find out which Australian development agencies and organisations are engaged in alternative trading. In small groups, contact each agency and obtain brochures or interview agency workers/officers about the following:
(a) Nature of the agency's alternative trading activities.
(b) How successful have they been?
(c) What difficulties have been encountered?
(d) What can Australian citizens do to help their alternative trading activities?

You can extend this activity into an exhibition of posters from the agencies or drawn up by yourself and your classmates for the benefit of other members of your school!

10. Sit down with your parents and other members of your family one evening or weekend and discuss the advantages and disadvantages of alternative trading. Volunteer to summarize at the next class lesson the results of the discussion. Were you able to reach a consensus on actions that your family as a whole can take to support alternative trading?

11. There is now increasing public concern about the state of the local, national and global environment.
(a) How is alternative trading related to this concern?
(b) List on a piece of paper your weekly consumption/use habits and lifestyle. Sort each item according to four possible categories:
- Things you can do without immediately.
- Things you can do with less immediately.
- Things you can substitute with more environmentally-caring products.
- Things you must use

(c) At the end of six months or so, look again at this checklist and decide if you have successfully followed your change intentions and if there are new changes you would like to make to the list.

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40. *Peace on Earth: In the Year 2000* continued

10. Find out what you can about the following:
    (a) The Anti-ballistic Missile treaty
    (b) The INF treaty
    (c) The Nuclear Non-Proliferation Treaty.

11. What is Australia's policy in relation to
    (a) Military aid
    (b) Visits of nuclear powered or armed ships
    (c) The 'joint facilities' at Pine Gap, Nurrungar, and North West Cape.

12. As a class, share this goal setting exercise. Participants work in pairs, taking turns. In response to questions from the facilitator, one speaks while the other records his or her answers with pen and paper; they then reverse roles.
    (a) If you were totally fearless and in possession of all your powers, what would you do to create peace on earth?
    (b) What strengths or resources do you now have, that would help you do that?
    (c) What will you need to learn or acquire?
    (d) What obstacles are you likely to put in the way of fulfilling this goal?
    (e) What can you do in the next 24 hours - no matter how small the step - that will help you reach that goal.

    When each partner has recorded the other's answers, they take turns reading them back to each other. It can be potent to hear your intentions and resources uttered in another's voice. It helps you to appreciate them and take them seriously. The papers are then exchanged, so that you can take your own answers home as a reminder.

13. The resolution of conflicts, whether interpersonal, national or global, is an important part of working for peace. There are three common ways of handling conflict:
    - aggressive (attacking)
    - passive (avoiding)
    - assertive (constructive negotiation)

    (a) Think of a conflict you have experienced. Which way did you deal with it? How could you have dealt with it in other ways?
    (b) Acting assertively or negotiating constructively is a skill we can learn. The following is one way. When a conflict occurs say: "I feel ..... (describe your own feelings) ..... when you ..... (objectively describe the other person's behaviour) ..... and I want ..... (describe exactly what you want) ....."

The 40 classroom activities in this book were produced as part of the Living in a Global Environment Project of the Australian Geography Teachers' Association Inc. In this project, active geography teachers and lecturers worked cooperatively to produce development education classroom activities based on *New Internationalist Calendar* materials for 14 to 16 year old students. The objectives of the activities are:

1. To present knowledge about development issues to students in an attractive format.
2. To develop basic reading, comprehension, graph and picture interpretation and writing skills.
3. To promote critical thinking skills through the analysis and evaluation of a variety of types of information.
4. To promote an understanding of the development problems facing people in Third World countries, and empathy with people from different social, economic and cultural backgrounds.
5. To develop an appreciation of the interdependence between the lives of people in Australia and people facing a variety of similar and different development problems in other countries.
6. To develop decision making skills through the consideration of alternative approaches to development.
7. To promote a willingness to become involved in seeking solutions to development problems.

Development themes and issues addressed in the resources and activities include:

- Spaceship Earth
- The Global Economic System
- Global Food Connections
- International Trade
- The Informal Economy
- Population
- Health
- Children
- Ageing Population
- Women and Development
- How to Feed the World
- The Green Revolution
- The Dwindling Seedbank
- Pesticides
- The Fuelwood Crisis
- Water Quality
- Irrigation
- The Fragile Earth
- Desertification
- Air Pollution
- Urbanisation
- Life in Shanty Towns
- Land Justice
- Third World Tourism
- Appropriate Technology
- Appropriate Aid
- Barriers to Independence
- Landmarks for Change
- Alternative Trading
- Peace on Earth

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